

MILLSTONE UNIT 3
PROJECT INSTRUCTION 2 (PI 2)
MP 3-SPECIFIC ASSESSMENT

REPORT TO MP 3 UPM AND MQC
ON PI 2 TEAM FINDINGS
REVISION 2

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Date: *July 1, 1996*

SUMMARY OF MP3 PI 2 REVISION 1 CHANGES

The PI 2 Team has completed the added scope of activities delineated in Revision 0 to our report. These additional activities include the following:

1) A sample of Plant Incident Reports (PIRs) dating back to just before initial commercial operation of the unit (January 1, 1986) was reviewed, and the relevant data extracted and added to the matrix. The Team randomly selected approximately one-third of those PIRs relating to Design and License Basis issues for each of the years, 1986 through December 31, 1993. This sample, together with the previously completed one hundred percent review of relevant PIRs and ACRs for the period January 1, 1994 through May 15, 1996, results in the entire operating lifetime of MP3 having been assessed relative to documented adverse conditions.

2) The impact of FSAR Volume 15 and 16 Questions and Answers (Q&As) on work which is dependent on the FSAR has been further considered, and **the Team has concluded that there is a vulnerability in this area.** Specifically, the pre-startup initiative to roll all Answers having impact on FSAR descriptions into the body of the FSAR was not consistently thorough. Thus, the potential exist that those using the FSAR in the conduct of their work activities may not have considered all relevant information if they did not refer to Volumes 15 and 16. We have recommended added scope as detailed in Section VII, *MP3-Specific Assessment*, Issue No. 11.

3) Finally, contrary to our initial recommendation to the Unit Director to waive a root cause analysis, **the Team decided that**, since all of the background research that would be required to support the root cause analysis of an organizational (human) performance failure had been completed, it was logical that **a formal analysis be completed.** That analysis is included as Section VIII to the Report.

TABLE OF CONTENTS

- I. Introduction
 - A. Overall Conclusion Relative to ACR 7007 Impact on MP3
 - B. Background and Key Documents
 - C. MP3 Unit-Specific Assessment Objectives
- II. Summary of Assessment Findings
- III. Sharing of Report with Other Units
- IV. ACR # 13302 Initiation
- V. Administration of PI 2 Team
 - A. Team Composition
 - B. Training
 - C. Database Selection
- VI. Team Approach
 - A. Time Frame and Scope of Documentation Selection & Approval
 - B. Database Matrix Guide
 - C. "Binning" Process
 - D. Key Personnel Interviews
 - E. Evaluation of Gathered Data
 - F. Formation of Preliminary Conclusions
 - G. Comparison of Preliminary Conclusions with MP3 CMP Scope
 - H. Development of Recommendations
 - I. Key Measures of Performance
- VII. MP3-Specific Assessment:
 - A. Review of Data, Observations and Recommendations
 - B. Key Measures of Performance Assessment
- VIII. Root Cause Analysis
- IX. Attachments
 - A. PI 2 Evaluation Material Selection
 - B. Database Matrix Coding Guide
 - C. Matrix Observations and Printout
 - D. Unit-Specific Assessment Qualification Records
 - E. Personnel Interview Package
 - F. MP3 ACR No. 13302
 - G. MP2 ACR No. 8761
 - H. Root Cause Analysis ERT (PI 2 Team) Report

Table of Contents (continued)

X. References

- A. Configuration Management Plan, Rev. 1
- B. NUC PI 2, *Unit-Specific Assessments*, Rev. 0
- C. NUC PI 14, *Project Process Administration*, Rev. 0
- D. MP1 ACR 7007, Event Review Team Report

I. **Introduction:**

A. Overall Conclusion Relative to ACR 7007 Impact on MP3

The PI 2 Team has concluded that MP3 has been impacted by many of the generic issues identified in the *ACR 7007-Event Review Team Report*. Both the MP3 Unit-Specific Assessment and the Root Cause Analysis completed as part of MP3 ACR No. 13302 have confirmed this to be the case. While improving in recent years, management expectations in many areas having impact on compliance with the design and license bases of the unit still fall short. This condition will require correction as part of the restart program. Generic elements of the Configuration Management and Nuclear Excellence Plans can be expected to provide the corrective actions for "soft" issues such as *Management Expectations, Training and Culture*.

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This significant shortfall in the area of configuration management has extended, to varying degrees, over the entire operating life of the unit including startup, and will necessitate a comprehensive evaluation of MP3's "current configuration". The PI 2 Team has considered that scope mandated by the MP3-specific CMP Implementation Plan, and can endorse that Plan conditional upon the inclusion of certain scope additions. These can be found in Section VII of this report.

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In summary, MP3 was built on a more solid design and documentation foundation than the remaining Millstone units but was also subjected to less than acceptable configuration management practices. Given the shorter period of exposure occurring in the later time frame of NU's nuclear experience, it is reasonable to have judged (as evidenced by MP3's CMP Implementation Plan) that the scope of evaluations requiring completion prior to the unit's return to service could be less than that of the adjacent units. The Team's review as presented in this report supports that conclusion.

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B. Background and Key Documents

This report was prepared consistent with the requirements of Section 3.2.1.b of *the Configuration Management Plan*, Revision 1, dated May 17, 1996, (Reference A) and, more specifically, NUC Project Instruction 2, *Unit-Specific Assessments*, Revision 0, dated May 17, 1996, (Reference B). The following is a brief discussion of the background of events and key documents leading to the requirement to prepare this report:

ACR 7007-EVENT REVIEW TEAM REPORT

Millstone Unit 1 (MP1), while completing extensive reviews in support of preparation of a response to the unit's 10 CFR 50.54(f) letter, initiated Adverse Condition Report (ACR) 7007 (Reference D) to document and have investigated an apparent high level of inaccuracy within the unit's UFSAR. On February 22, 1996, the ACR 7007 Event Response Team (ERT) published the *ACR 7007 - EVENT RESPONSE TEAM REPORT*. In their report, the Team identified several fundamental causes for the MP1 UFSAR inaccuracies, and noted that "*Due to the nature of the causes identified in this report, the potential exists for the presence of similar configuration management conditions at Connecticut Yankee and the other Millstone units.*" Further noted was the fact that, "*The team cannot ascertain the full extent of the implications without a sample similar to the set of 50.54(f) initiatives currently in progress for Unit 1.*"

MP3 PROJECT COMPLETION PLAN

As a direct result of the ACR 7007-ERT Report, the MP3 staff prepared a unit-specific Project Completion Plan for the purpose of defining the scope of MP3 activities to be completed to "*ascertain the full extent of the implications*" of the ACR 7007 ERT Report.

NRC'S MARCH 7, 1996, 10 CFR 50.54(f) MP3 LETTER

By way of this letter, the NRC requested, within 30 days of its receipt, NNECO's plans and schedules for completion of reviews precipitated by the Report, and noted that "*...we did not have a recent inspection*

history or findings with regard to Millstone 3 that revealed design deficiencies similar in number and nature to those of Millstone 1 and 2....". At this point in time the NRC had not imposed any limitations on the continued operation of MP3.

NRC'S APRIL 4, 1996, 10 CFR 50.54(f) LETTER

At the time of issuance of this letter, MP3 was in a shutdown condition to correct self-identified deficiencies. Additionally, a special inspection team dispatched to the unit had, by this time, "*identified programmatic issues and design deficiencies at Millstone Unit 3 that are similar in nature to those at Millstone Units 1 and 2.*"

Thus, the NRC amended their March 7, 1996 instructions to specify the requirement for additional information to be submitted "*no later than 7 days prior to Millstone Unit 3 restart (prior to criticality) from its current outage...*". Further, the NRC noted that "*Your submittal should describe actions taken to ensure that design and configuration control deficiencies at Millstone Unit 3 have been identified and have been evaluated with regard to plant operability, the existence of unreviewed safety questions, and reportability. Your submittal should also address corrective actions.....Further, prior to restart of Millstone Unit 3, you must resolve, to the NRC's satisfaction, the issues raised in the examples described in the enclosure, the Auxiliary Feedwater valve issues, and the recirculation spray system matter.*"

NU'S CONFIGURATION MANAGEMENT PLAN

A management decision was made to replace the above-described Project Completion Plan with a new document called the *Configuration Management Plan (CMP)*, together with a set of *Project Instructions (PIs)*. This action was taken in recognition of the growth in magnitude of the Project and the need for a greater degree of implementation formality and management involvement. Attachment # 3 to the CMP is the *Millstone unit 3 CMP Implementation Plan*, wherein MP3-specific plans to satisfy the intent of the overall CMP are presented. Project Instruction 2, *Unit-Specific Assessments* is part of the CMP and is the document governing the conduct of the MP3 assessment, the results of which are contained in this report.

NUC PI 2, UNIT-SPECIFIC ASSESSMENTS

This PI specifies the following:

- Complete an in-depth assessment to determine the reasons for issues identified over the last 2 years (at a minimum) by the NU Connecticut units, Regulators, and other industry organizations,
- Initiate PI activities via the initiation of a Category "B" ACR to address Licensing and Design Bases issues for the unit,
- Compile a matrix of identified issues against the appropriate ACR 7007 categories and others as necessary,
- Compile and review key indicators of engineering performance, and
- Provide a comprehensive final report containing conclusions and recommendations relating to concurrence with or appropriate modifications to the CMP scope.

C. MP3 Unit-Specific Assessment Objectives

Since several of the ACR 7007 ERT findings relate to issues that are common to the Connecticut nuclear units, the PI 2 Team (The Team) had, as its primary objective, the determination of reasons for issues of a repetitive or "common theme" nature identified on MP3 over the last two and one-half years (1/1/94 through 5/15/96). This information was then used to quantify the extent to which MP3 has been impacted by the conditions identified in the 7007 Report. Using the information developed in making this determination, The Team then assessed the appropriateness of scope of the MP3 CMP, in particular, with respect to that portion of the plan to be completed as Phase I activities leading to return of the unit to service. The Team approached this task with the understanding that MP3 had, to some degree, been impacted by the issues of ACR 7007. Also, The Team had a fundamental need to determine how the "current configuration" of MP3 had, as a result, been affected. Having then determined the impact on the unit via the

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evaluation of considerable data, the Team was able to assess whether the CMP-described scope of activities are of proper focus, breadth and depth. This caused the Team to be focused most heavily on "current configuration" issues to facilitate the validation and completion of a properly directed CMP scope of activities. While the reasons for flaws in MP3's "current configuration" were useful inputs to, in a qualitative sense, the assessment of acceptability of the unit's CMP scope, these are "previous state" reasons which are undergoing correction for the "future state" needed to retain configuration management, once re-established to an acceptable degree of assurance. Thus, The Team approached this assignment with an acceptance that "future state" improvements would be in place to support the high quality lifetime management of unit configuration as a result of other CMP generic elements and initiatives such as the *Nuclear Excellence Plan*. Additionally, a qualitative assessment of these improvements relative to their effectiveness as corrective actions for the causal factors identified in our Root Cause Analysis was to be completed.

II. Summary of Assessment Findings:

Detailed scope modification recommendations are presented in Section VII, *MP3-Specific Assessment*.

1) The ACR 7007 ERT-identified generic issues have had impact on MP3, and specifically, MP3's FSAR. NU's failure to treat the unit's FSAR as a document with which verbatim compliance is required is the primary causal factor for that document containing numerous discrepancies. Thus, the need for the MP3 CMP is established. | 2

2) The Team concludes that the MP3 CMP is sound in its approach, method, scope and timing of Project Phases, and will, with the scope additions described in Section VII.A., provide the reasonable assurance required to respond to the NRC's letter of April 4, 1996. The personnel interviews we conducted confirm this conclusion and were important inputs to the recommended scope changes. | 2

3) There is a need for improved knowledge of, and respect for, the FSAR within some unit departments that currently view the document

as one of historical interest (an ACR 7007 finding). This is evidenced by both documented conditions (ACRs, PIRs etc.) and the personnel interviews we conducted. (Attachment F of Section VIII is a summary of interview discussions and evaluation results.) **Note that there are interviewee comments that go beyond the scope of PI 2 that should not be ignored.** These comments are highlighted and included with Attachment E for your review and disposition.

4) The "As-Built" condition of the unit as depicted on the unit's drawings of record appears to be acceptable. This is evidenced by the relatively low number of ACRs and PIRs written against discrepant conditions in this area. Additionally, the safety significance of documented drawing deficiencies is, in almost all cases, very low. | 2

5) A significant number of the issues detected and documented in the past two and one-half years relate to issues that have existed since unit startup. In almost all instances, issues having safety significance fall into this category. The Team's expanded review of PIRs dating back to initial commercial operation of the unit reveals that for the first half of the units operating lifetime, "grooming" issues prevailed, based on experienced problems or inability to pass specific tests. The last half of the unit's current lifetime has witnessed a more probing approach which has brought to the forefront, the "what if" sort of questions that have revealed deficiencies that would negatively impact system performance under postulated (versus having already occurred) scenarios.

6) The threshold for documenting problems has been and continues to be lowered over the course of the period studied. This is particularly the case since initiation of the current ACR process. As a result, more discrepant conditions are being detected, documented and dealt with. This does give rise to the appearance of a higher rate of incidence of problems, but can be interpreted, in part, as a positive indicator of staff performance.

III. Sharing of Report with Other Connecticut Unit Staffs:

Note that PI 2 requires the sharing of this report with the staffs of the remaining Connecticut units. Please ensure that the report is appro-

priately distributed upon your acceptance of the document and is forwarded to Nuclear Records for future reference.

IV. ACR # 13302 Initiation:

PI 2 requires that the Unit-Specific Assessment be initiated by the generation of a Category "B" ACR. ACR # 13302 was submitted to unit management on May 7, 1996. This report will serve as the vehicle for closure of the ACR.

Attachment F is a copy of ACR # 13302.

V. Administration of PI 2 Process:

A. Team Composition

George R. Pitman -- Team Leader
Ken L. Burton
Mark J. Whitney

B. Training

The PI 2 specified training was completed and is documented on the qualification cards of Attachment VIII.D.

C. Database Selection

The Microsoft ACCESS Database was selected for compiling the PI 2-required data in matrix form.

VI. Team Approach:

A. Time Frame and Scope of Documentation Selection & Approval

The Team selected the period January 1, 1994, through May 15, 1996, as the period of consideration for review of PI 2-specified documentation. As noted earlier, a sample of PIRs dating back to 1986 was also selected. Attachment A in Section IX lists the field of |2 documentation obtained, screened and evaluated. Also included as

part of that attachment is the UPM's approval of the Team's proposal for the PI 2-specified review time frame and scope.

It is worthy to note that the review period selected for one-hundred percent review of applicable specified documents, while relatively short when compared to MP3's current age, provides a significant sampling of unit life-related issues identified during this period. Many of these issues are related to actions taken before the unit went into commercial operation. This near-term (approximately two and one-half years) documentation review covers the period when NNECO's threshold for documenting problems was very low and a probing culture prevailed. This provides a basis for the Team's decision to complete an assessment of less than one-hundred percent (one-third) of older PIRs.

Employee interviews were conducted as one element of the Team's information gathering process. The interviews drew, in part, on key members of MP3's engineering, operations, maintenance and I&C technical and management staff who were assigned to the unit during the unit construction period and, in most cases, are still on board the MP3 Team.

B. Database Matrix Development

Attachment B is the key to cell definition and ACR 7007 coding that was used in entering data into the database presented as Attachment C. The matrix fields were selected on the basis of their usefulness to the Team's understanding of such issues as "original design" versus "modifications to design" or "test procedure" deficiency etc., and are supportive of ACR 7007-related category segregation.

C. "Binning" Process

Having developed a suitable spread sheet (matrix), gathered documentation was distributed among team members for purposes of screening for applicability, review of selected documents and entry of data in accordance with PI 2 Section 1.4.2. This process supported the later "query" process wherein specific "key words" (or codes) were searched. This provided an understanding of the contents of specific

bins to be developed. Attachment C is the matrix printout by system number.

D. Key Personnel Interviews

Twenty-four (24) current NU employees were selected for interviews with one or more of the Team members. Individuals were selected on the basis of their past and current positions and the relationship of their job assignments to the concept of configuration management. Those interviewed are listed in Attachment E. A sample questionnaire and a summary of interview results are also included. As noted earlier, some interviewee comments are outside the scope of the PI 2 effort and will be turned over to others on the MP3 CMP Team.

E. Evaluation of Gathered Data

A composite of ACCESS database queries was run to generate the desired bins of information. Those bins having potential value to the identification of vulnerable areas were then qualitatively compared to the results of employee interviews. Where correlation was strong in a particular area, the area or issue was designated as one that requires comparison with the CMP scope of activity. Of particular interest was the question "Does current scope already cover this type of issue or should additional scope be considered?" | 2

F. Formation of Preliminary Conclusions

Based on the above, the Team developed a listing of key areas, issues etc. which require investigation in support of determining NNECO's level of confidence with respect to MP3's current level of configuration management integrity.

G. Comparison of Preliminary Conclusions with MP3 CMP Scope

This was the first point in time when the Team, in a detailed manner, set about to fully understand the scope of the MP3-specific CMP. This strategy resulted in an absence of "mind-set" which could subconsciously result in attempts to support reasons why the CMP is appropriate. Thus, the Team attempted to match Team-identified

vulnerable areas with CMP-described activities. In instances where no CMP scope item would have found the type of issue being evaluated, a scope addition was defined for consideration for inclusion with the Team's final recommendations.

H. Development of Recommendations

Based on the above, the Team assessed which of the scope additions were appropriate to the provision of a high level of confidence in the current configuration of MP3 upon completion of the CMP Phase I scope of activities. The selected additions are presented in Section VII.A, entitled, *MP3-Specific Assessment*.

I. Key Measures of Performance

Information taken from the Measures of Performance year-end reports for 1994, and 1995, and from the same year's Level II Reports up to the date of discontinuation of that report (11/95) was reviewed. A qualitative assessment of the meaning of these indicators to the issues at hand was made and is presented in Section VII.B.

VII. MP3-Specific Assessment:

A. Review of Data, Observations and Recommendations

Based on the method described above, The Team compiled a listing of vulnerable areas that could potentially impact the license and design bases of the unit. The discussion of each of these areas is followed by a brief explanation as to where in the MP3 CMP scope the concern would be addressed or, if not addressed, a recommended change to that scope. Our recommendations are in boldface print. The listing follows:

Issue No. 1: Open Bypass Jumpers (BJs)

Outstanding BJs stand out as particularly vulnerable since the work done under a BJ can, on occasion, represent the installation of a "work-around" of a designed feature. Further, that design feature is likely described in the FSAR. Also included in this category is, for example, temporary filter material and in the extreme case, such equipment as

instrumentation installed under an AWO versus a BJ. In the case of the instrumentation example, this equipment could be used to monitor a system or systems not currently performing up to standard, for which the temporary added equipment is needed to guide operators in the conduct of compensatory measures.

Assessment No. 1:

Page 10 of 30 of PI 5 describes a Jumper Bypass (should be Bypass Jumper) Review as an integral part of the System Readiness Review. This satisfies the above-stated concern so long as **one part of the review ensures that any Jumper Bypasses remaining in place upon unit startup have been considered relative to compatibility with the FSAR and have a written safety evaluation.** Additionally, **temporary features such as filters, monitors, sump pumps etc., which have been installed without use of the BJ process should be evaluated for need for a BJ and for FSAR compatibility.**

Issue No. 2: PDCEs

The Team found, via the interview process, some concern for that subset of modifications completed by the Unit Engineering Staff during the period beginning just before unit startup until mid-1991. This work was completed using the E&DCR and PDCE processes. The PDCE process is a short form version of the PDCR process. As acknowledged during our interview of the unit's first Engineering Manager, this engineering staff was not consistently knowledgeable of the full cycle of design and documentation considerations. Thus, it is reasonable to suspect that some errors could have been incorporated into the unit design via this activity. It is useful to note that PDCEs, when properly selected for use, are involved in making minor changes to low safety significance systems; however, there was a period wherein PDCE use wandered outside the intended bounds resulting in that process being eliminated.

Assessment No 2:

Beginning on Page 7 of 30 of PI 5, a comprehensive review of AWOs for association with such items as PDCRs, PDCEs etc. is described.

Subsequent PI 5 pages detail steps including "Identify those PDCRs that may affect the FSAR...." It is assumed that this includes PDCEs and E&DCRs as noted on Page 7, since these are the more vulnerable subset of design change packages. **A thorough review of early vintage (1983 through 1991) PDCEs and E&DCRs is recommended during the conduct of already specified reviews.** Please add this clarification if the Team's assumption is incorrect or otherwise ensure our recommendation is included in the scope of activities.

Issue No. 3: QA Calculations

There are two areas of potential vulnerability relating to calculations, as follows:

- 1) Assumptions used as the bases for calculations may have been too narrow in their interpretation; i.e., the "worst case" may have been defined with a singular emphasis on safety function accomplishment versus the combination of that functional accomplishment and the "what ifs" associated with other failures or related design sequences. The RSS and QSS piping and anchor issues are examples of this type of error in assumption, and,
- 2) Calculation tracking integrity necessary to guide engineers involved in modifying a system to the last revision of the appropriate calculation was not always present. As a result, the "basis calculation" from which the revision was made may not have been the correct basis. In some cases, individuals may have generated an entirely new calculation, not knowing that one already existed that should have represented the starting point. One calculation assumption may conflict with or invalidate another one, without either being compared to each other or to the FSAR.

Assessment No. 3:

The vertical slice reviews of PI 15 provide a good sampling of critical system calculation status. The Team's discussions with MPR Associates, Inc. personnel, revealed that the recently identified stress calculation issues will cause a vertical slice "bulge" to occur to

facilitate further exploration of this issue. The Team judges this scope to be sufficient for the vulnerability identified. Additionally, the Configuration Management PI will correct processes and procedures so that, on a "Going Forward" basis, similar tracking issues will not be forthcoming. The Team does, however, recommend the **generation of a Master Listing of all calculations generated to date so that a proper foundation for future work is established.** While no scope changes are proposed, The Team chose to note this item due to its importance to the overall Project.

Issue No. 4: FSAR Correlation to Operating Procedures

There are several distinct categories of potential vulnerability in this area, as follows:

1) During MP3's startup phase, some systems, when subjected to the planned startup series of tests, did not perform as expected. The corrective action in some cases was to change the manner in which the system operated to "make it work". While this may be acceptable in most instances, without a thorough re-visitation of the FSAR-described design and system function, the trap is set for the potential to wander away from the functional characteristics described in the FSAR. The SLCRS system is an example of a system having experienced this form of startup problem.

2) This category of procedural issue has to do with systems first put into service supporting on-line operation of the unit with procedures in place that are consistent with the FSAR. Some time later, however, due to complexity or difficulty experienced with operation per the procedure, changes were made without a full understanding of the impact of that change on unit design conformance. An example is the Reactor Vessel Head Lift evolution, initially completed in concert with and at the same vertical lift rate as refueling cavity pool level increase. Without a proper understanding of the basis for the original procedure, that procedure was changed, invalidating or, at a minimum, making less conservative, head drop calculation assumptions. 2

3) This next category has to do with the incorporation of "work-arounds" for purposes of making systems work that otherwise work

poorly or not at all. Again, as above, this cannot be done without a clear understanding of FSAR-described function. The now bypassed automatic boration feature of the CVCS is a good example which, while not one which has resulted in unacceptable system function, has been a nuisance and has contributed to several reactivity excursions.

4) This category deals with those systems originally operated in accordance with the FSAR description, which, due to inadequate preventive maintenance, suffered performance degradation to the point where they were simply taken out of service. An example is that of the emergency diesel generator air dryers which were removed from service for an extended period. Another is the DAS P-10 RCS Leakage Monitoring Pump which was defeated for six years before realizing that the sensitivity it affords is required by Technical Specifications.

5) This last category has to do with systems abandoned in place which may still be described in the FSAR as though they were still utilized. Additionally, the means of abandonment or isolation from other active systems may create a situation different from that described in the FSAR.

NOTE: (The NRC's Inspection Team, in their May, 23, 1996, exit meeting, also noted the MP3 vulnerability regarding operation of FSAR-described systems.)

Assessment No. 4:

The Team feels strongly that scope be added in the area of translation of FSAR-described operating features to Operating Procedures. We therefore recommend that the Operations Department **complete a review of all Group II systems for FSAR-to-Operating Procedure compatibility**. Group II is recommended since, historically, many of MP3's problems have occurred in these types of systems (SLCRS, HVAC, Radwaste etc.). **10 CFR 50.59 evaluations need to be completed if the unit returns to service with systems operated at odds with the FSAR described method of operation**. In the long term (Phase II), The Team recommends that all system operating procedures be checked for potential conflict with the FSAR.

Issue No. 5: Original Plant Startup Punchlist Items

Based on feedback from the interviews we conducted, The Team has determined that some relatively significant work releases issued during the year before initial commercial operation as well as shortly thereafter may reveal vulnerabilities relating to non-compliance with FSAR-described features and functions. A recently identified example has to do with the assumed loss of one train of Service Water, its impact on the RSS containment sump water temperature and subsequent impact on RSS piping stresses. This problem was identified by the A/E shortly before unit startup and a decision was made to solve the problem with operator actions. The appropriate procedures were never changed, however.

Assessment No. 5:

While not described in a PI, Action Item II.I of the MP3 Restart |2 Criteria describes a review of Engineering Backlog including startup punchlist scope. This is judged to be sufficient to cover this issue. It is worthy to note in Section VII.B., the Team's observation that Backlog level is a very good indicator of a unit's susceptibility to configuration problems.

Issue No. 6: Missed Commitments

A theme commonly encountered during the interview phase of this assessment was that commitment tracking has not been optimal. The process of understanding commitments that were made and the way in which they were closed out has been cumbersome. In particular, it is difficult to tie license commitments to the actions which closed them out. It is also difficult to ensure that future fixes do not unknowingly invalidate past commitments.

Assessment No. 6:

The License Basis reviews of PI 6 sample the integrity of commitment tracking on MP3. While this is sufficient MP3-specific action, as part of our five-unit initiatives, however, the Team recommends that a

means be established to ensure commitments are tracked and traceable so that the impact of future commitments is readily known.

Issue No. 7: A/E Interfaces with Major Supplier Packages

The ESAS Load Sequencer and some of the major Westinghouse supplied NSSS Systems were identified as being worthy of examination relative to the manner in which the A/E, Stone and Webster, interfaced with this equipment. There were early indicators of interface compatibility problems in the ESAS Load Sequencer packages. | 2

Assessment No. 7:

The Vertical Slice scope includes systems with major interfaces and should, as a result, be sufficient to cover this issue. However, the Team recommends that reviewers be alerted to be particularly mindful of the major AE/Vendor interfaces. | 2

Issue No. 8: FSAR Familiarity and Use

The Team has concluded that there is a segment of MP3's staff that is close to the surveillance test writing and test performance process that has insufficient knowledge of FSAR impact potentially resulting from their work activities. The Team came to this realization as part of the personnel interview process. Rather than to single out particular organizations, it is sufficient to say that any organization involved in the writing and/or conduct of surveillance tests need to be knowledgeable of the FSAR. | 2

Assessment No. 8:

The Team recommends that the MP3 UPM ensure that the *Training element of ACR 7007 corrective actions is inclusive of this employee population for each of the Connecticut Units*, as this is likely to be a common weakness. Details are provided in the Attachment E summary of interview results.

Issue No. 9: FSAR Changes without 10 CFR 50.59 Evaluations

The recent NRC Inspection Team documented a problem that was not and could not have been detected by methods used by the PI 2 Team. This relates to FSAR changes made without the benefit of a 10 CFR 50.59 evaluation.

Assessment No. 9:

No currently specified MP3 CMP activity deals with this concern. Thus, The Team recommends that **all FSAR changes made for reasons other than plant design changes (covered by PDCRs, PDCEs etc.)** be reviewed to ensure that either a 10 CFR 50.59 evaluation exists or a clear and acceptable rationale is in place justifying the lack of need for an evaluation.

Issue No. 10: DCN Use Vulnerability

Millstone 2 ACR No. 8761 was initiated to address a high level of configuration management-ACR generation (87 ACRs) on the unit during the last year. The draft of MP2's response document (report) is included as Attachment G. In their report, the MP2 reviewers note that "Use of DCNs for drawing update without a parent document or 10CFR 50.59 evaluation should cease except for purely administrative changes." It is not clear to the MP3 PI 2 Team, that MP3 has not been impacted by the issue that gave rise to this comment.

Assessment No. 10:

MP3's Design organization should **complete a review of DCNs falling into this category (Category 8, Administrative DCNs) to ensure that drawings have not been changed to reflect field conditions without first ensuring that the field condition is in accordance with the intended design.** Further, **the requirement to cease the use of Category 8 DCNs for purposes other than "purely administratively changes" must be mandated on MP3,** similar to actions taken by MP2 and subsequently, MP1.

Issue No. 11:

Volumes 15 and 16 of the MP3 FSAR contain the NRC's questions relative to the design undergoing their review and NNECOs answers to these questions. A pre-startup decision to incorporate any answers of substance to descriptions contained in the FSAR body into the body of the document was not consistently and thoroughly implemented. It is also apparent that those using the FSAR do not dependably refer to Volumes 15 and 16 to determine if their work is impacted. Thus, the intent of the FSAR description, as augmented by the answer to NRC's question, may not be clear to those now using the FSAR for assurance of maintenance of the design basis.

Assessment No. 11:

An evaluation of need for a more complete incorporation of NU's responses to NRC's questions into the body of the FSAR is recommended. The Team acknowledges that, in the short term, training of relevant sectors of the organization in the need to consider the Question and Answer volumes whenever they are using the FSAR as the source of design basis information may be a suitable alternative to revising the FSAR if that is deemed necessary. Additionally, **the extent to which the already completed CMP reviews may have been impacted by reviewers not familiar with Volumes 15 and 16 needs to be assessed to determine if a re-visitation of certain FSAR sections may be required.**

B. Key Measures of Performance Assessment

The Team had planned to complete an objective review of these measures, only to find that their real value lies in the area of "tone setting". Thus, a simple qualitative assessment of the Key Measures of Performance (MOPs) for MP3 was made.

The Team's review of the MP3 MOPs revealed an interesting overall indicator that seems to be consistent with what we are now learning from those in the industry who have previously been involved in Restart Programs. This has to do with the ability of a particular unit to

perform well, when measured by one set of factors related to unit output and system availability, only to have a vulnerable condition lurking in the background that ultimately affects good performance. That condition is one of having significant levels of Backlog in many process areas. These include, but are not limited to status of Design Drawings, PDCRs, NCRs, Bypass/Jumpers, NRC Open Items and AWOs.

This observation led The Team to conclude that a critical element of the CMP must be that of close scrutiny of existing backlog, reduction of backlog in areas deemed appropriate and a commitment to eventual elimination of backlog. The MP3 CMP is judged to have a good mix of activity in this area. As a result, The Team proposes no Phase I scope changes, but **places a heavy emphasis on the requirement for a long term continual reduction program, ultimately taken to the point of backlog elimination, together with a commitment to prevent new growth.**

In summary, for the period evaluated, MP3 had very good performance-oriented MOPs while, at the same time, those measures of outstanding workload (backlog) can now be seen as indicators of the problems we are experiencing today.

VIII. Root Cause Analysis:

Attachment H is the Root Cause Analysis ERT Report. Our summary conclusion as to the primary causal factor for configuration management deficiencies at MP3 relates to *the unit's failure to treat the FSAR as a document with which verbatim compliance is required.* Management expectations in this area were not clear, resulting in a wide diversity in the quality of work affecting or affected by the FSAR. The Report concludes that the corrective actions planned or ongoing as part of the generic "fixes" (configuration management process changes, Nuclear Excellence Plan etc.) are appropriate for correction of the conditions which have prevailed over the unit's lifetime. As noted in several sections of the PI 2 assessment report, "current configuration" issues will be corrected by unit-specific CMP scope completion.

ATTACHMENT A PI 2 EVALUATION MATERIAL SELECTION

PI 2 Minimum Requirement Subset:

- o NRC Inspection Reports related to LB or DB issues and internal notes, matrices, and findings of recent NRC LB or DB team inspections
(Used NOV's dating back to January 1, 1994, and matrix prepared to collect Virgilio Team findings as of end of first two week visit -- this proved to be useful input, generally validating conclusions already reached using internally generated ACRs and PIRs)
- o Last two (2) INPO Assessment Reports
(These were most useful in terms of capturing symptoms such as large backlogs, lack of key measures, but in other respects, duplicated our own identified issues)
- o ISEG Reports relating to process and LB and DB issues
(Generally useful in a validation capacity with nothing new presented)
- o Relevant QAS Reports (audits, surveillances, etc.)
(Generally useful in reiterating self-identified issues)
- o NU internal self-assessments
- o Applicable unit-specific assessments and audits
- o ACR 7007 Event Review Team Report
(Found only the generic issues to be applicable with no unit-unique observations)
- o ACRs (and PIRs) selected based on key word (license, design, process, etc.) searches
(This was the most useful source of information with 400++ entries selected for imputing to the matrix)
- o PORC Subcommittee and Committee reviews of LB and DB-related issues
(We were able to identify none of these)
- o NSAB reviews of LB and DB related issues
- o NS&O communications on areas to be covered by CMP
(Reviewed these and found them to be useful to the generation of the CMP and PIs (specifically PI 2), but not a source of information useful to implementation of PI 2 -- Note that Oversight's comments led to the expansion of Revision 1 scope to cover PIRs dating back to startup of the unit.)

ATTACHMENT A

From: GEORGE R. PITMAN JR
To: brothmh, lyonstw
Date: 5/7/96 3:22pm
Subject: Configuration Management Plan (CMP), PI 2 - Recommendations for Your Approval

Project Instruction 2, Section 1.1.1, requires the generation of a unit-specific Category "B" ACR as the means to initiate actions on the PI. Further, the PI recognizes, in accordance with NGP 2.40, that there may be reasons to waive the normal requirement for a formal root cause analysis to be completed. In this case, we propose to defer to the ACR 7007 Event Review Team Report-identified root causes as the basis for not completing another analysis. Our deliverable to the MP3 UPM will be a comprehensive report, containing an assessment of adequacy of the MP3-specific CMP and recommended modifications to that plan, as appropriate.

Ken Burton and I will be writing the ACR this afternoon for delivery to unit management by the MP3 UPM. The Unit Director's approval of our recommendation or alternative instruction relative to the waiver of a root cause analysis is needed for our PI 2 file. Ken will provide, on request, any background information leading to our recommendation.

In accordance with Sections 1. and 1.3.2 of the PI, we will be compiling for review, specific process, license basis and design basis information covering the period from the present back to January 1, 1996. This covers a period slightly greater than the minimum specified by the PI. We further propose to include SLCRS and Service Water System issues that had their roots and resolutions dealt with prior to 1994. We request the UPM's documented concurrence with our proposal or alternative instructions for our PI 2 file. Note that the PI and MCP are in Draft form and we are simply getting a head start on data gathering.

For your information, members of the PI 2 Team are Ken Burton, Mark Whitney, Bob Veklund and George Pitman.

We intend to provide to the MP3 UPM by Friday, May 17, 1996, the final report as specified in Section 1.6.2 of the PI.

CC: usa3,debarrea

NOTE THAT, PER THE COVER MEMORANDUM AND PAGE 2 OF THIS REPORT, THE PI 2 TEAM WILL BE EXTENDING THE INTERVAL OF REVIEW FOR PIRs BACK TO DATE OF COMMERCIAL OPERATION.

Items selected above and beyond basic minimum requirement of PI 2:

- o Final Report - Generic Implications of Recent MP1 Design Issues
(Found this to be specific to MP1 and overall generic design related issues being handled by 5-unit 7007 Corrective Action Teams)
- o SLCRS PIRs
(Provided good insight to original construction issues and attempts to correct these)
- o Service Water System Fouling PIRs
(Useful to operational/monitoring understanding of otherwise acceptable system)

Major scope addition made by PI 2 Team for MP3:

- o The Team decided in the early going that it would be meaningful to gain the thoughts and opinions of personnel close to the unit staff over the long run; i.e., throughout construction and operation of MP3.
(This turned out to be a useful tool resulting in good correlation between people's recollections/experiences and actual incurred events and findings on the unit)

Revision one PIR Interval Increase :

- o Based on input of the Oversight organization, a decision was made to expand the period of review for PIRs back to the date of initial commercial operation of the unit. The results of this expansion will be reported on in Revision 1 to The Team's report.

ATTACHMENT B

DATABASE MATRIX CODING GUIDE

CELL DEFINITIONS

Source:	ACR, PIR, LER ISEG Report, Interview etc. (Text Field)
Deficiency:	Short description of deficiency from source doc. (Text Field)
System #:	From Attachment 1 (Text Field)
Group:	Either 1, 2 or 3, from Attachment 2 (3 sheets)
Org Design:	Deficiency as a result of an original design error (bad assumption, calc etc.)
Mod:	Deficiency as a result of a mod to the original design
Field:	Deficiency resulted from installation of mod or designed by field
Vend:	Deficiency as a result of vendor error (MSIVs, skid problems etc.)
Other:	Design deficiency having other source of problem (Text Field)
DP:	Operational or Departmental procedure was the cause of deficiency
TS:	The Technical Specification was in error or not complied with
Test:	Error was in test conduct or inadequate test procedure (surveillances etc.)
Other Ops:	Operational deficiency having other source of problem (Text Field)
BL:	Deficiency could have been avoided by completion of a Backlog activity
PPP:	Deficiency due to configuration mgmt. process, procedure or program (NGP, EQ etc.) - includes mistakes made while using these, as well
ACR 7007	Deficiency tied to one of ACR 7007 causal factors (use codes below (Text Field))
Notes:	Any notes useful for key word search to zero in on trend(s)

BASIS FOR N/A SOURCE DOCUMENT

- 1) Deficiency not due to Config. Mgmt. Admin. Process, procedure or program, and,
- 2) Deficiency not related to Design Basis issue, and,
- 3) Deficiency not related to License Basis issue.

ACR 7007-RELATED CODES

	(VOIDED THIS CATEGORY AS IT WAS NOT USED)	CM ADMIN PP&P INADEQUATE "B"	FAILURE TO FOLLOW CM ADMIN PP&P "C"
PDCR/PDCE/BJ		1	1
DCN/DCR		2	2
CALCS/SCRS		3	3
SAF. EVAL (50.59)		4	4
SPECIFICATIONS		5	5
MEPL		6	6
RIE		7	7
TSCH		8	8
FSARCR		9	9
NCR		10	10
OTHER		N/A	11

(Please note that the Team selected the above codes as ones that would be indicative of the types of problems that can result in loss of control of unit configuration.)

ATTACHMENT C

MATRIX OBSERVATIONS

Facts:

- o 481 unique lines of data were entered
- o 120 entries relate to modifications to the original design; (24% of entries)
- o 164 entries relate to the original design of the unit; (34% of entries)
- o 23 entries relate to Group 1 systems having FSAR discrepancies
- o 38 entries relate to all Groups having FSAR discrepancies
- o Of 120 entries related to modifications, 46 entries relate to Group 1 systems
- o Of 164 entries related to original design, 86 entries relate to Group 1 systems

Observations:

- o The 481 entries were screened from several thousand documents as being potentially relevant to gaining an understanding of MP3's current configuration.
- o Over the last 29 months, 34% of the issues falling into this category are related to original unit deficiencies while 24% of the issues have to do with changes made since startup of the unit. Original unit conditions are found by a combination of ongoing reviews and as a result of operational anomalies, while the majority of modification-related issues are identified at the time of incorporation and/or placement into service of the modification.
- o Query (or Sort) 1 is a sort of original unit/Group 1 system issues. Those issues having functional significance are highlighted. Sort 2 is a sort of modification related/Group 1 system issues, again highlighted to depict those of functional significance. These sorts serve to validate many of The Team's recommendations relating to a need for a greater review focus on the period immediately surrounding unit startup.
- o Sort 2 noted above, has a proliferation of process, procedure and program issues identified. This is consistent with ACR 7007 findings and makes a case for the Administrative Processes and Procedures generic element of the overall CMP. Attention to detail problems are common in this grouping and have remained a problem up to the time of initiation of the current outage.
- o Sort 3 is a sort of all Group 1 systems having deficiencies related to modifications and, specifically, to the modification process (PDCR, BJ etc.). Of the twenty "hits", six have potential functional significance.
- o Sorts 4 and 5 are sorted on the keyword(s) "FSAR" (Sort 4) and "FSAR and Group 1 (Sort 5). These sorts are indicative of the array of FSAR detail issues we have to deal with and the need for stronger culture, management expectation, training and personnel performance; all parts of either the Nuclear Excellence Plan and/or the CMP.

Deficiency	
RSS PIPING OPERATING BEYOND ANALYSIS	H/L
RSS TEMP. TRANSIENT BEYOND DESIGN BASIS	H/L
CTMT EQT HATCH COMPONENTS NOT SHOWN AS CAT I	H/L
SEQUENCER TIMING DISCREPANCY	H/L
"A" MSIV FAILURE TO OPEN	H/L
PIPE SUPPORT LOADS EXCEED DESIGN BASIS LIMITS	
MOV MOTOR TERMINAL BLOCKS NOT EQ QUALIFIED	
SOCKET WELD LEAK DUE TO FATIGUE	
FSAR DB ISSUE; EDG STARTING AIR PRESSURE	
FEED WATER CHECK VALVE BACK LEAKAGE	
BORIC ACID TRANSFER PUMP FAILED TO STOP	
CHECK VLV BACK LEAKAGE	
OPS CRIT DRAWINGS DOESNT REFLECT AS BUILT STATUS	
CONTROLLER SETPOINTS DIFFER FROM CALC SETPOINTS	
SIT PIPING DIFFERS FROM DRAWING	
QA DESIGNATION ON VALVE LABELS	
MSIV TEST SOLENOID 4A FAILED ON SURVEILLANCE TEST	
OPERATING FATIGUE FAILURE	
MSIV ZERO CLOSED POSITION INDICATION QUESTIONED	
CONTAINMENT FOUNDATION PEAK LOADING MAY BE EXCEEDED	
NEW FUEL ASSEMBLIES DROP POTENTIAL HIGHER THAN ASSUMED	
D RCP SEAL HOUSING LEAKING	
DRAWING DISCREPANCY RES. AB CONDITION FOR RC STAMP ELEMENTS	
INSTRUMENT SET POINTS NON-CONSERVATIVE DUE TO CALCULATION ERROR	
CCP MOTOR AIR DEFLECTOR DAMAGE	
BREAKER LABELS AT ODDS WITH ONE-LINE DRAAWING DAGRAMS	
CCP PIPING TEMPERATURES LIMIT EXCEEDED	
FSAR IN ERROR ON RESPONSE TIME TESTING TIME SPEC. FUNCTIONS	
SETPOINTS NON-CONSERVATIVE	
NON-CONSERVATIVE SETPOINT	
DRAWING AS BUILT ERROR	
POTENTIAL CLOGGING OF BCCS THROTTLE VALVES	
DISCREPANCY BETWEEN DBTP AND TECHNICAL SPECIFICATION HEAD VALUE	
MINOR DRAWING ERROR	
MINOR DRAWING DISCREPANCIES	
CALCULATION USED WRONG CALCULATION	
WIRE IN MOV CIRCUIT NOT LOADED LANDS	
LOOP ISOLATION TIME LIMIT EXCEEDED	
MINOR P&ID DRAWING PHYSICAL LOCATION DESCRIPTION DISCREPANCY	
RSS TEMPERATURE ISSUE PIPING STRESS	
AFW FCV ISOLATION CAPABILITY DEFICIENCY	
FSAR DESCRIPTION HAS NO TOLERENCE ON JACKET WATER TEMPERATURE	
TERRY TURBINE AFW VALVE SHEET TO TEST MDAFWP	
CALCUATION DIDNT TAKE INTO ACCOUNT A PREVIOUS MODIFICATION	
TERRY TURBINE & MDAFW PUMP PRE-LUBE NOT PERFORMED OER VENDOR REQUIREMENY	
DRAWING DISCREPANCIES	
STATION BATTERY QUALIFIED LIFE EXPIRED EQ	
MOV THRUST CALCULATION REVIEW INCREASED RSS TEMP	
RHR PUMP TRIP ON LONG TERM RECIRC	
MSIV STROKE TIME PROBLEM	
TERRY TURBINE STEAM SUPPLY VALVES	
MSIV STROKE TIME PROBLEMS	
TERRY TURBINE STEAM SUPPLY VALVES	
AUX FEED PIPE SUPPORTS:HELB ISSUE	
BABT HEATER DESIGN INADEQUATE	
CAT ISOLATION VALVE LEAKAGE	
DAY TANK LEVEL SWITCH	
FW ISOL. VALVE STROKE TIME	
RWST TRIP ON LOW TEMPERATURE	
SSPS LOGIC CARDS USED AS A SWITCH	

SENT →
WRS
12/11

Deficiency
VOLTAGE REGULATOR POTENTIOMETER OPERATION
MSIV PARTIAL STROKE TIME
FW ISOL MAY HAVE DEGRADED WITHOUT BEING DETECTED
RX TRIP SETPOINTS WITH INOP SPRS SAFETIME NONCONSERVATIVE
AFW PIPING NOT SUPPORTED FOR HIGH ENERGY
"C" MSIV PART STROKE FAILURE
PIPE HANGER IMPROPERLY ANALYZED
'C' MSIV FAILED CLOSED
RCS PRESSURE BOUNDARY LEAKAGE
'C' MSIV PART STROKE FAILURE
RSS HX NOT ANALYZED FOR 100 PSI (SUPPORT)
RSS HX OUTLET PIPING STRESS ANALYSIS TEMP TO LOW
APPENDIX R ISSUE WITH SWP*MOV130 VALVES
INTAKE STRUCTURE SUMP PUMP PLUGGED INTO VITAL RECEPTACLE
CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEMENT
K AND L SAFETY TRAY FILL CRITERIA
MDAFWP PRE-LUBE
CABLE TRAYS LOADED BEYOND FSAR LIMITS
SWP DISCHARGE VALVE NOT IN TECH SPEC
DRAWING DISCREPANCY ON SERVICE WATER BACKWASH FEATURE
ELECTRICAL PROTECTION CRITERIA NERMS AND FIELD SETTINGS
EDG SETPOINTS
WHAT LIMITS RCS-02 VALVE TO 27 PSI DELTA IN CLOSING DIRECTION
CCP SYSTEM WALKDOWN ITEMS
TECH SPEC INTERPRETATION OF WHETHER 3FWA*AOV36A,B,C AND D CAN BE CLOSED A
CCP SYSTEM TEMPERATURE ISSUES

SC ITEMS

MUCH HIGHER % OF HITS FOR SUBSTANTIVE ISSUES

Query "Group 1" - "Notes"

2

g1

6/4/96

Deficiency	
INADEQUATE WORK SCOPE IDENT. BY PDCR (A c2 Dwg. Issue)	
BJ ATTACHED TO OPS CRIT DRAWINGS & NOT INSTALLED	
NEW OPS CRIT DWGAWINGS NOT REDLINED	
PLANT CHANGE INITIATED VIA DCN VS PDCR	
DCNS NOT PROCESSED PROPERLY	
DCNS SIGNED OFF WITHOUT MOV ENGINEER REVIEW	
DCN ON DWST DID NOT LIST DOING AS OPS CRIT DRAWINGS	
PRESSURE ALARM SWITCH DIFFERS FROM DRAWING	
INCOMPLETE INCORP OF CHANGES ON OPS FORM	
NEW VALVE LABELS INCONSISTENT WITH P&ID DRAWING	
SP TESTING INCONSISTENT W/1ST PROG.	
EDG ALARM SETPOINT NOT CHANGED ON TIME	
QUESTION ON FLEX TUBING EVALUATION ON STWR LEVEL INTRO. LINE	
MINOR FSAR ERRORS NOT AFFECTING FUNCTION	
PDCR FAILED TO SPECIFY MCC LABELING UPDATES	
MOV OPERATOR INSTALLED BACKWARDS	
DISCREPANCY BETWEEN FSAR AND CALCULATION	
THERMAL RELIEF CALCULATION ERROR	
BJ REQUIRES OPERATOR ACTION YET NO PROCEDURES IN PLACE FOR THIS	
CABLES NOT IN	
BJ DEFEATED AUTO START FEATURES	
FAILURE TO DERIVE PROPER SURVEILLANCE LIMITS BASED ON CALCULATIONS	
DISCREPANCY BETWEEN OPS CRIT DRAWING AND FIELD CONDITION	
CABLE DOESN'T MEET FLAME RETARDANCY REQUIREMENT OF FSAR	
BABT HEATER DESIGN INADEQUATE	
MOV CONTROL MOD NOT VERIFIED	
RCS RTD TEMP HIGHER THAN ASSUMED IN QUALIFIED LIFE EQ	
RCP TVCS-SEABROOK INFO	
PIPE HANGER IMPROPERLY ANALYZED	
IST SURVEILLANCE NOT CONSERVATIVE WITH SUPPORT TO CORPORATE ENG	
CORE ANALYSIS USED NON CONSERVATIVE RWST MINIMUM VOLUME	
DRAWING ERROR/LACK OF VERIFICATION	
HOOK VENTS INSTALLEL ON UNSPECIFIED LINES	
INADEQUATE DIRECTION IN AWO	
AWOS NOT REVIEWED PROPERLY	
NONCONFORMING MATERIAL INSTALLED	
CONTROLOTRON CABLE FIRE RATING	
APPENDIX R ISSUE WITH SWP*MOV130 VALVES	
INTAKE STRUCTURE SUMP PUMP PLUGGED INTO VITAL RECEPTACLE	
K AND L SAFETY TRAY FILL CRITERIA	
SI RELIEF VALVES AND IMPACT OF RAISED SETPOINT	
CABLE TRAYS LOADED BEYOND FSAR LIMITS	
ELECTRICAL PROTECTION CRITERIA NERMS AND FIELD SETTINGS	
EDG SETPOINTS	
WAS DIAPHRAGM COMPLETELY REMOVED FROM DWST	
CCP SYSTEM WALKDOWN ITEMS	

46 Items - ALMOST ALL HITS ARE FOR PROCESS/PROCEDURE

Query (Group 1) + CI + MODS

g1

3

6/4/96

Deficiency
BJ ATTACHED TO OPS CRIT DRAWINGS & NOT INSTALLED
NEW OPS CRIT DWGAWINGS NOT REDLINED
PLANT CHANGE INITIATED VIA DCN VS PDCR
INCOMPLETE INCORP OF CHANGES ON OPS FORM
PDCR FAILED TO SPECIFY MCC LABELING UPDATES
MOV OPERATOR INSTALLED BACKWORDS
BJ REQUIRES OPERATOR ACTION YET NO PROCEDURES IN PLACE FOR THIS
CABLES NOT IN
FAILURE TO DERIVE PROPER SURVEILLANCE LIMITS BASED ON CALCULATIONS
DISCREPANCY BETWEEN OPS CRIT DRAWING AND FIELD CONDITION
CABLE DOESN'T MEET FLAME RETARDANCY REQUIREMENT OF FSAR
MOV CONTROL MOD NOT VERIFIED
HOOK VENTS INSTALLED ON UNSPECIFIED LINES
INADEQUATE DIRECTION IN AWO
NONCONFORMING MATERIAL INSTALLED
APPENDIX R ISSUE WITH SWP*MOV130 VALVES
K AND L SAFETY TRAY FILL CRITERIA
SI RELIEF VALVES AND IMPACT OF RAISED SETPOINT
CABLE TRAYS LOADED BEYOND FSAR LIMITS
ELECTRICAL PROTECTION CRITERIA NERMS AND FIELD SETTINGS

Deficiency
AFW CK VLV NOT IN IST PROGRAM
INCORRECT MEPL EVAL FOR CAT 1 SEISMIC STRUCTURE
FSAR DOESN'T REFLECT NEW SITE BLDGS
FSAR CHANGE APPD W/O SAFETY EVALUATION
BJ VIOLATED REG GUIDE 1.143
FSAR DB ISSUE; EDG STARTING AIR PRESSURE
FSAR COMMITMENT NOT MET
DISCREPANCIES BETWEEN DRAWINGS & FSAR
FSAR DOES NOT CORRECTLY DESCRIBE REEL MONITOR FUNCTION
MINOR FSAR ERRORS NOT AFFECTING FUNCTION
FSAR DOES NOT REFLECT MODIFICATION CHANGES
FSAR IN ERROR ON RESPONSE TIME TESTING TIME SPEC. FUNCTIONS
FSAR ERROR IN RESPONSE TIME TESTING - CONFLICT WITH TECH SPEC
BACKLOG RESULTS IN FSAR AND OTHER PROGRAMS NOT BEING TIMELY UPDATED
FSAR NOT PROPERLY TRANSLATED INTO CHEMISTRY TABLE
FSAR & TECH SPEC FLOW RATE NOT IN AGREEMENT
FSAR DOES NOT AGREE WITH NETM
DISCREPANCY BETWEEN FSAR AND CALCULATION
FSAR AND P&ID DRAWING OUT OF DATE PER LATEST TSCR
RV HEAD LIFT LOAD PATH UNSPECIFIED
HISTORICAL CONCERN FOR FSAR DEFICIENCIES SIMILAR TO MP1
FSAR SYSTEM FUNCTIONAL DESCRIPTION DISCREPENCY
LPM AS-BUILT DRAWING CONDITION NOT ACCURATELY REFLECTED IN FSAR
FSAR PROTECTION SETTINGS NOT SAME AS FIELD SETTINGS
CABLE TRAY FILL NOT IN ACCORDANCE WITH FSAR DESCRIPTION
FSAR NOT UPDATED PER PDCR
FSAR DESCRIPTION HAS NO TOLERENCE ON JACKET WATER TEMPERATURE
CABLE DOESN'T MEET FLAME RETARDANCY REQUIREMENT OF FSAR
DIESEL STARTING AIR DEGRADATION
CONTAINMENT SUMP PP OPERATION NOT PER FSAR
AFW PIPING NOT SUPPORTED FOR HIGH ENERGY
NOT TESTING PER FSAR
CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEMENT
K AND L SAFETY TRAY FILL CRITERIA
HOW DOES ACR PROCESS ENSURE FSAR UPDATE
CABLE TRAYS LOADED BEYOND FSAR LIMITS
SWP CUBICLE VENTILATION SYSTEM
DIESEL STARTING AIR STUCK OPEN RUST
DIFFERENT EDG START TIMES: FSAR VS TS

38 HITS

Queries "FSAR" + "GRP 1"

g1

5

6/4/96

Deficiency
AFW CK VLV NOT IN IST PROGRAM
INCORRECT MEPL EVAL FOR CAT 1 SEISMIC STRUCTURE
BJ VIOLATED REG GUIDE 1.143
FSAR DB ISSUE; EDG STARTING AIR PRESSURE
DISCREPANCIES BETWEEN DRAWINGS & FSAR
FSAR DOES NOT CORRECTLY DESCRIBE REEL MONITOR FUNCTION
MINOR FSAR ERRORS NOT AFFECTING FUNCTION
FSAR IN ERROR ON RESPONSE TIME TESTING TIME SPEC. FUNCTIONS
FSAR ERROR IN RESPONSE TIME TESTING - CONFLICT WITH TECH SPEC
DISCREPANCY BETWEEN FSAR AND CALCULATION
RV HEAD LIFT LOAD PATH UNSPECIFIED
FSAR DESCRIPTION HAS NO TOLERENCE ON JACKET WATER TEMPERATURE
CABLE DOESN'T MEET FLAME RETARDANCY REQUIREMENT OF FSAR
DIESEL STARTING AIR DEGREDATION
CONTAINMENT SUMP PP OPERATION NOT PER FSAR
AFW PIPING NOT SUPPORTED FOR HIGH ENERGY
NOT TESTING PER FSAR
CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEMENT
K AND L SAFETY TRAY FILL CRITERIA
HOW DOES ACR PROCESS ENSURE FSAR UPDATE
CABLE TRAYS LOADED BEYOND FSAR LIMITS
SWP CUBICLE VENTILATION SYSTEM
DIESEL STARTING AIR STUCK OPEN RUST

23 Hits

Unit Specific Assessment Matrix -Unit 3

21-Jun-96

Source	Sys No	Group	Org Design	Mod	Field	Vend	Other	DP	TS	Test	Other Ops	BL	PP	ACR 7007
Deficiency	Notes													
ACR 00128			No	Yes	Yes	No		No	No	No		No	No	B1,C
INADEQUATE WORK SCOPE IDENT. BY PDCR	WORK DONE WITHOUT A DCN													
ACR 00286			Yes	No	No	No		No	No	No		No	Yes	C5
BTP 9.5-1 NOT PROPERLY CONTROLLED	OLD CONTROLLED COPIES NOT DES													
ACR 00311			No	No	No	No	DOC C	No	No	No		No	Yes	
DOCUMENT CONTROL PROBLEMS	USE OF MOST CURRENT PROCEDU													
ACR 00633			Yes	No	No	No		No	No	No		No	Yes	C1
PROJECT CLOSE-OUT DEFICIENCIES	PDCR RELEASE TO													
ACR 00871			No	Yes	No	No		No	No	No		No	No	B2
BREAKER MIS-LABELING ISSUE	SPARE ON OPS CRIT DRAWING; GIV													
ACR 01148			No	Yes	No	No		No	No	No		No	Yes	B3
FSAR DOESN'T REFLECT NEW SITE BLDGS	BLDGS 433, 703, 328 AND PART OF 3													
ACR 01174			No	Yes	No	No		No	No	No		No	No	C1
BJ INSTALLED WITHOUT AWO	INTERPRETATION OF WC-10 ISSUE													
ACR 01179			No	No	Yes	No		No	No	No		No	Yes	C1
GENERATOR PHASE IMBALANCE RELAY REMOVAL	BJ NOT APPROVED PRIOR TO REMO													
ACR 01195			Yes	No	No	No		No	No	No		No	Yes	C3
SETPOINT DIDN'T CONSIDER RELAY INACCURACY	FOUND VIA NRC 1EN-92-77 REVIEW													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 01540			No	No	No	No				es	No	No	No	Yes
DIFFICULTY IDENTIFYING AWO PKG REQUIREMENTS														
NEEDED PROCEDURES HARD TO DE														
ACR 02167			No	Yes	No	No	NGP C	No	No	No		No	Yes	C9
FSAR CHANGE APPD W/O SAFETY EVALUATION														
NGP 4.03 VIOLATION														
ACR 02304			No	No	No	No	BJ	No	No	No		No	Yes	C1
BJ VIOLATED REG GUIDE 1.143														
ALSO VIOLATES FSAR SECTION 11.2.														
ACR 02405			No	No	No	No	PROC	No	No	No		No	Yes	
OPS FORM 3672.1-1 REV 17 INCORRECT														
MISSING REV 16 DATA ON INSTRUM														
ACR 02691			No	No	No	Yes		No	No	No		No	Yes	C5
ALVE PACKING NOT 1AW DESIGN SPEC														
ORDERED GRAPHOIL, REC'D TEFLO														
ACR 02861			Yes	No	No	No		No	No	No		No	No	
STORAGE CABINET NOT RESTRAINED														
FIRE EQUIPMENT LOCKERS														
ACR 02879			Yes	No	No	No		No	No	No		No	Yes	C5
CONTROLLED VENDOR MANUAL NOT LATEST REVISION														
ENSURE WE HAVE LATEST VENDOR														
ACR 03004			No	No	No	Yes		No	No	No		No	Yes	
TEST EQUIPMENT SUPPLIED W/O A PO														
RECEIPT INSP NOT PERFORMED														
ACR 03010			Yes	No	No	No		No	No	No		Yes	No	
RELAYS NOT INSTALLED PER DESIGN DIAGRAMS														
IDENTICAL @ STARTUP AND LATER														
ACR 03012			No	No	No	No	BIENN	No	No	No		No	Yes	
PROCEDURE BIENNIAL REVIEW MISSED														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 03218	No		No	No	No	No		No	No	No	ISSUE	No	Yes	
PRESSURE GAUGES NOT TEMPERATURE COMPENSATED	SELF ASSESSMENT HEARD ON SUR													
ACR 03272	No		No	No	No	No	SETPO	No	No	No		No	Yes	
ROD MONITOR SETPOINTS IMPROPER	CAUSE UNKOWN													
ACR 04507	No		Yes	No	No	No		No	No	No		No	Yes	C2
ELECTRICAL SCHEMATIC DRAWINGS INEFFECTIVELY CONTR	OLD DWNGS RETAINED IN ERROR													
ACR 04559	No		No	No	No	No	FSAR I	No	No	No		No	Yes	B9
FSAR COMMITMENT NOT MET	SHIFT TURNOVER EFFECTIVENESS													
ACR 05196	Yes		No	No	No	No		No	No	Yes		No	No	
IRE RATED ASSEMBLIES	SP AND EM60 SERIES DRAWINGS DI													
ACR 05276	No		Yes	No	No	No		No	No	No		No	Yes	C1
CAUTION TAGS NOT REMNED FROM HEATERS	HEATERS WERE REMOVED IN 1992													
ACR 06519	No		No	No	No	No		es	No	No		No	Yes	C2
OPERATION DEPT. DOES NOT USE GRITS TO VERIFY LATEST	NO SPECIFIC PHEPRIAL PROBLEM A													
ACR 06529	No		No	No	No	No		No	No	No		No	Yes	C2
2 OVER 1 SIESMIC CONC IDENTIFIED	TEMP EQUIP, FTF PROGRAM REQ													
ACR 07337	Yes		No	No	No	No		No	No	No		No	Yes	C5
LOSS OF CENTRAL OF EQ MASTER LIST	INSTALLATION/QUALIFICATION OKA													
ACR 07730	No		No	No	No	No		No	No	No		No	Yes	C11
OUT OF DATE PROCEDURE USED BY TECH SUPPORT	FTFP													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 07746			No	Yes	No	No		No	No	No		No	Yes	C1
APPENDIX R (BTP 9.5.1) NOT UPDATED TO REFLECT PDCR	PDCR DIDNT GO FAR ENOUGH WITH													
ACR 08429			No	No	No	No		No	No	No	YES	No	No	
SCAFOLDING NOT INSTALLED PER SPECIFICATION SEQ. 6	MAINTENANCE FTFP													
ACR 08442			No	No	No	No		No	No	No	MAINT	No	No	
SCAFOLDING INSTALLATION DOESNT MEET SPECIFICATION	MAINTENANCE FTFP													
ACR 08452			No	Yes	No	No		No	No	No		No	No	
INCORRECT CABLE NUMNBER SPECIFIED IN BJ	ISOLATED MISTAKE													
ACR 08566			Yes	No	No	No		No	No	No	YES	No	No	
RONG CIRCUIT CARD INSTALLED IN PROTECTION SYSTEM	I&c ERROR													
ACR 08830			No	Yes	No	No		No	No	No		No	Yes	C9
BACKLOG RESULTS IN FSAR AND OTHER PROGRAMS NOT BE	NOT AN EVENT													
ACR 08880			No	Yes	No	No		No	No	No		No	No	
CWP LUBE WATER REQUIRED CONTRARY TO DESIGN INTENT	ASSUMPTION ERROR - ISOLATED													
ACR 08903			Yes	No	No	No		No	No	No		No	No	
FSAR DOES NOT AGREE WITH NETM	EQ PAPER ISSUE - NO FUNCTIONAL I													
ACR 09157			No	Yes	No	No		No	No	No		No	Yes	C1
DCM NOT PROPERLY INTEGRATED WITH WP&C	ADMINISTRATIVE FIND													
ACR 09321			No	Yes	No	No		No	No	No		No	No	
FSAR AND P&ID OUT OF DATE PER LATEST TSC														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
E94-009			No	No	No	No	SE PR	No	No	No		No	No	
SE MANUAL INADEQUATE R & R DEFINITION	EXEC SUMMARY OF REPORT													
IMA2.1			No	Yes	No	No		No	No	No		No	Yes	C1
THROTTLE PRESSURE LIMITS BYPASSED SINCE 92														
193		4	No	No	No	No		No	No	No		No	Yes	B*
RCP STANDPIPE LEVEL CONTROLLED BY CTMT ISOL	UNCORRECTED MATERIAL COND, S													
193			No	No	No	No		No	No	No		No	No	
PLANT ENGINEERS DID NOT PURSUE EQUIP PROBLEMS, QUE	LACK OF RESOURCES - FEEDWATER													
193			No	No	No	No		No	No	No		Yes	No	
GOAL FOR REDUCTION OF BACKLOG	GENERAL OBSERVATION													
IES.1			No	Yes	No	No		No	No	No		No	Yes	C1
SOME SYSTEM ENGINEER NOT AWARE OF STATUS OF BJS A														
IES.2			No	No	No	No		No	Yes	No		No	Yes	C*
SOME SYSTEMS HAD ACTIVITIES PERFORMED PRIOR TO TES	NO AS FOUND INFO AVAILABLE													
IES.3-1			No	Yes	No	No		No	No	No		No	Yes	C1
BJ'S INCOMPLETE MODS AND A FEW CONTROLLED EQUIP IN	GENERAL COMMENT CANNOT MAIN													
IMA2			No	Yes	No	No		No	No	No		Yes	No	
EQUIPMENT PROBLEMS REQUIRE OPERATES COMPENSATO	GENERAL - BUT SLCRS MENTIONED													
IPE-95-011			No	No	No	No		No	No	No		No	Yes	C*
MISOPERATION OF EQUIP	INCLUDED SIH THROTTLE VLS													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
IPE-95-011			No	No	No	No			No	No	No	No	Yes	C1
TEMPORARY MODS DATING BACK TO 1986														
IPE-95-011			No	Yes	No	No			No	No	No	No	Yes	C1
BA MODS RESULTED IN INABILITY TO AUTO M/U SOMETIMES														
N95-07			No	No	Yes	No			No	No	No	No	Yes	
SCAFFOLD INSTALLED IMPROPERLY														
VARIOUS JOBS														
N95-09			No	No	No	No			No	No	No	INSP	Yes	B6
MEPL DOWNGRADE PROCESS														
GENERIC UNIT 2 ISSUE														
NA 12540			No	Yes	No	No			No	No	Yes	No	Yes	C1
EST PLAN MISSING FROM PDCR														
POCR 3-94-162														
NRB1			No	Yes	No	No			No	No	No	Yes	No	
DELYED IMPLEMENTATION OF PDCRS														
Delays in installing approved PDCRS														
NRB2			No	No	No	No	IST		No	No	Yes	No	Yes	B3
SAFETY EVALS NOT UNIFORMLY DONE FOR ISTS														
Safety evals. are nconsistently performe														
NRB3			Yes	No	No	No			No	No	No	No	Yes	B3
ANALYSIS VS SIMULATOR DISCREPANCY ON SECURING SI														
Safety injection recovery time by operato														
NRB4			No	No	No	No	PIR		No	No	No	No	Yes	C11
PIRS CLOSED OUT BEFORE NCRS ARE CLOSED ON SAME ISS														
NCR not yet written														
NRB5			No	No	No	No	EOP		No	No	No	EOP	Yes	B11
EOP CHANGES DONE WITHOUT V&v DOCUMENTED														

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<u>Deficiency</u>	<u>Notes</u>													
NRB6			No	No	No	No		No	No	No		No	Yes	B4
PROCEDURE OMITTED AN ALARM CREDITED IN A BJ	Safety evaluation issue													
NRB7			No	No	No	No		No	No	Yes		No	Yes	B11
USE OF IST PROCS VS SPECIAL PROCS	Direction on what to use when unclear													
NRB8			No	No	No	No		No	No	No		No	Yes	B10
INEFFECTIVE CORRECTIVE action trend noted														
NRB9			No	No	No	No		es	No	No		No	Yes	C11
SYSTEM NOT OPERATED AS INTENDED	CCP system													
NSAB1			No	No	No	No	PROG	No	No	No		No	Yes	C11
WEAKNESSES IDENTIFIED IN REVIEW OF OPERATING EXPERI	Internal and external info: Mrule identifie													
NSAB10			No	Yes	No	No		No	No	No		No	Yes	C1
PDCR SAFETY EVAL DOESN'T ADDRESS USQ	Potential USQ													
NSAB11			No	Yes	No	No		No	No	No		No	Yes	C3
DESIGN ASSUMPTIONS NOT IAW DESIGN BASIS														
NSAB12			No	No	No	No	ACR	No	No	No		No	Yes	C11
ACRS NOT LINKED FOR SIMILAR EVWENTS	Coding Issue													
NSAB13			No	No	No	No		No	No	No		No	Yes	C11
CORRECTIVE ACTIONS NOT MONITORED PROPERLY	Tracking issue													
NSAB14			No	No	No	No		No	No	No		No	Yes	C11
UNTIMELY RESOLUTION OF ISSUES	Delayed close out: culture issue													

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<u>Deficiency</u>	<u>Notes</u>														
NSAB15			No	No	No	No				No	No	No	No	Yes	C11
INTERNAL INFORMATION EXCHANGE IS INADEQUATE	Culture issue														
NSAB16			No	No	No	No	SURV		No	Yes	No		No	Yes	B11
SURVEILLANCE CLOCK TRIGGERS ARE INADEQUATE	Avoid missing surveillances with proper t														
NSAB17			No	No	No	No				No	No	TAG	No	Yes	C11
TAGGING ERRORS: INADEQUATE USE OF STAR	Culture														
NSAB18			No	Yes	No	No				No	No	No	No	Yes	C2
NON STANDARD DESIGN PRACTICES USED	Revised Design Control Manual														
NSAB19			No	Yes	No	Yes				No	No	No	No	Yes	B3
INADEQUATE CONTROL OF VENDOR CALCS	NU procedure deficiencies														
NSAB2			No	No	No	No	QA		No	No	No		No	Yes	C11
QA AUDITS NOT HIGH QUALITY	PIR/LER corrective action issues														
NSAB20			No	No	No	No	LER		No	No	No		No	Yes	B11
INADEQUATE DETAIL INLERS															
NSAB21			No	No	No	No	PROG		No	No	No		No	Yes	B11
INTEGRATING PROCESSES TO SUPPORT PROGRAM IMPLEMENT	IGSCC example														
NSAB22			No	No	No	No			No	Yes	No		No	Yes	B9
DIFFERENT EDG START TIMES: FSAR VS TS															
NSAB3			No	No	No	No	AUDIT		No	No	No		No	Yes	C11
1990 INPO AUDIT FINDINGS NOT INCORPORATED	MP2 identified issue														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
NSAB4			No	No	No	No	CA	No	No	No		No	Yes	C11
CORRECTIVE ACTIONS INEFFECTIVE														
NSAB5			No	No	No	No		es	No	No		No	Yes	C11
POST OUTAGE STARTUP TEST PROGRAM INADEQUATE Program inadequate or missing														
NSAB6			No	No	No	No		es	Yes	No		No	Yes	C11
RETEST PROGRAM DEFICIENCIES														
NSAB7			No	No	No	No		No	No	Yes		No	Yes	C11
FAILURE TO FOLLOW AWOPROGRAM Procedures were too hard to comply wit														
NSAB8			No	No	No	No		es	No	No		No	Yes	C11
LAGGING EXPECTATIONS UNCLEAR OR INADEQUATE Procedures and management direction														
NSAB9			No	No	No	No	ACR	No	No	No		No	Yes	C11
ACR BACKLOG-UNTIMELY CLOSE OUT Slow ACR close out														
NSABE1			No	Yes	No	No		No	Yes	No		No	Yes	C8
INADEQUATE DETAIL PTSCR,PLAR Add backup info to these documents														
NSABE10			No	Yes	No	No		No	No	No		No	Yes	B1
CUMULATIVE IMPACT ON CMF OF PDCRS CMF impact reviewed individually,not cu														
NSABE11			No	Yes	No	No		No	No	No		No	Yes	B1
USE OF PDCR VS DCN MOV modifications														
NSABE12			No	No	No	No		No	Yes	No		No	Yes	C8
OUTDATED INFO IN PSTCR PROCESS Review may use wrong info														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>	
<u>Deficiency</u>	<u>Notes</u>														
NSABE13			No	Yes	No	No			No	No	No		No	Yes	C1
GENERIC VS SPECIFIC PDCR USAGE	MOV's treated generically vs individually														
NSABE14			No	No	No	No			No	No	No		No	Yes	C9
IMPROPER USE OF PLAAR VS TSCR															
NSABE2			No	Yes	No	No	TSCR		No	No	No		No	Yes	C1
INADEQUATE DETAIL, PDCRS	Add backup info to these documents														
NSABE3			No	No	No	No			No	No	No		No	Yes	C4
INADEQUATE DETAIL, SAFETY EVALUATIONS	Add backup info to these documents														
NSABE4			No	Yes	No	No			No	No	No		No	Yes	C3
CHANGING DESIGN ASSUMPTIONS	Clearly state the process used														
NSABE5			No	No	No	No	TSC		No	Yes	No		No	Yes	B8
OVERUSE OF TSCR VS. PROCEDURE CGS															
NSABE6			No	No	No	No			No	Yes	No		No	Yes	C3
IDENTIFY INFO FOR YRM VS TS	Put this info in the correct document														
NSABE7			No	Yes	No	No			No	No	No		No	Yes	B4
24 MONTH FUEL CYCLE IMPACT															
NSABE8			No	No	No	No			No	Yes	No		No	Yes	C11
EXTENDING SURV USING INADEQUATE HISTORICAL INFO															
NSABE9			No	No	No	No	PRA		No	No	No		No	Yes	C11
USE OF PRA TO SOLVE PROBLEMS															

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-87-054			No	No	No	No		No	Yes	No		No	No	
LOCAL TE-77 CTMT EQ TEMP >TS LIMIT	30 DAY LER													
PIR 3-88-060			Yes	No	No	No		No	No	No		No	Yes	C5
VARIOUS SWITCHES NOT EQ QUALIFIED	INTERNAL EQ REVIEW LILTON-VEAM													
PIR 3-88-087			No	Yes	No	No		es	No	No	WC	No	Yes	
TEMPORARY PUMP INSTALLED WITHOUT PAPER	QSS-BJ OUT BUT NOT SIGNED													
PIR 3-90-110			No	No	No	No		es	No	No		No	No	
H2 MONITOR OVERHEATED	VENTILATION SYSTEM OP. IMPROP													
PIR 3-94-070			No	No	No	No		es	No	No		No	No	B1
UJ REVIEW NOT CONDUCTED														
PIR 3-94-130			No	No	No	Yes		No	No	No		No	No	B1
NUCLEAR FUEL ANALYSIS ERROR	ROTATED GRIDS													
PIR 3-94-244		1	No	No	No	No		No	No	No		No	No	C*
MOV BOLTING DISCREPANCIES	FOLLOW UP TO PIR 3-94-139													
PIR 3-94-295			No	No	No	No		No	No	No	MGT	No	Yes	C*
TYGON HOSES LEFT ATTACHED	FAILURE TO FOLLOW PROCEDURE													
PIR 3-94-299		4	No	No	No	No		No	No	No	PE	No	Yes	C*
FIRE SEAL MISSING														
QA-93-5224			No	Yes	No	No	DESIG	No	No	No		Yes	Yes	C3
PDDS BACKLOG REGARDING SQRT UPDATES	BACKLOG													

Source	Sys No	Group	Org Design	Mod	Field	Vend	Other	DP	TS	Test	Other Ops	BL	PP	ACR 70/7	
Deficiency	Notes														
QA-94-4020			No	No	No	No			es	Yes	Yes	ACP-Q	No	Yes	
NEED MORE FREQUENT UPDATES TO SURV. MASTER TEST C CORRELATION ISSUES															
QA-94-4322			No	No	No	No			No	No	Yes	ACP 9.	No	Yes	
P-7 ANALOG CHANNEL OP TEST NOT DONE PER REQUIREME NO PROCEDURE FOR THIS															
QA-95-4043			No	Yes	No	No			No	No	No		No	Yes	C1
BJs NOT EVALUATED AGAINST BTP 9.5.1 COMPATIBILITY PROCESS CHECK FOR COMPATIBILI															
QA-A23070			No	No	No	No	NL		No	No	No		No	Yes	
CONFUSION REGARDING NOV COMMITMENTS VERSUS INFO COMMITMENT TRACKING/BINNING IS															
QS-93-022			No	Yes	Yes	No			No	No	No		No	Yes	C10
CHANGE IN AWO WITHOUT PROPER REVIEWS QSD SURVEILLANCE															
QS-93-023			No	Yes	Yes	No			No	No	No		No	Yes	C1
WRONG AWO TYPE USED TO IMPLEMENT PDCR QSD SURVEILLANCE															
QS-93-028			No	Yes	Yes	No			No	No	No		No	Yes	C1
WRONG AWO TYPE USED TO IMPLEMENT PDCR QSD SURVEILLANCE															
QS-93-034			No	Yes	Yes	No			No	No	No		No	Yes	C1
WRONG AWO TYPE USED TO IMPLEMENT PDCR QSD SURVEILLANCE															
QS-93-119			No	No	Yes	No			No	No	No		No	No	
VOTES TESTING SURVEILLANCE QSD SURVEILLANCE															
QS-93-131			No	No	No	No	SPEC I		No	No	No		No	Yes	B5
PROCEDURE AND HILTI SPEC CONFLICT QSD SURVEILLANCE															

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
QS-93-148			No	Yes	Yes	No		No	No	No		No	Yes	C5
IMPROPER WELD MATERIAL USED	QSD SURVEILLANCE													
QS-94-076			No	No	Yes	No	NEO 6	No	No	No		No	Yes	
WORKING WITHOUT PURCHASE ORDER	QAS SURVEILLANCE													
QS-94-086			No	No	Yes	No		No	No	No		No	No	
NCR NOT PROCESSED CORRECTLY	QAS SURVEILLANCE													
QS-94-086			No	No	Yes	No		No	No	No		No	Yes	C1
FAILED RETEST: CLOSURE NOT SHOWN ON AWO	QAS SURVEILLANCE													
QS-94-120			No	No	Yes	No		No	No	No		No	No	
IMPROPER SIGN OFF OF AWO	QAS SURVEILLANCE													
QS-94-124			No	No	Yes	No		No	No	No		No	Yes	C5
WRONG WELD WIRE USED	QAS SURVEILLANCE													
SIP-MP3-P-9			No	No	No	No		No	No	No		No	Yes	C1
PDCR GENERATION FROM BJ'S NOT TIMELY	QSD SURVEILLANCE													
SIP-MP3-P-9			No	Yes	Yes	No		No	No	No		No	Yes	
AWO DEFICIENCIES (VARIOUS)	QSD SURVEILLANCE													
SIP-MP3-P-9			No	Yes	Yes	No		No	No	No		No	Yes	
AWO DEFICIENCIES (VARIOUS)	QSD SURVEILLANCE													
SIP-MP3-P-9			No	No	No	No		No	No	No	DRAW	No	Yes	
OPS NOT USING GRITS FOR DRAWING REVS	QSD SURVEILLANCE													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
SIP-MP3-P-9			No	No	No	No			No	No	No	DRAWI	No	Yes
OPS NOT USING GRITS FOR DWNG REVS	QSD SURVEILLANCE													
SIP-MP3-P-9			No	No	Yes	No			No	No	No		No	Yes
SEISMIC PROGRAM NOT IMPLEMENTED CONSISTENTLY	QSD SURVEILLANCE													
SIP-MP3-P-9			No	No	Yes	No			No	No	No		No	Yes
SEISMIC PROGRAM NOT IMPLEMENTED CONSISTENTLY	QSD SURVEILLANCE													
SIP-MP3-P-9			No	No	No	No			No	No	No		No	Yes C1
BJ RESTORATION NOT PER PROCEDURE	QSD SURVE'LLANCE													
SIP-MP3-P-9			No	No	No	No			No	No	No		No	Yes C1
RESTORATION NOT PER PROCEDURE	QSD SURVEILLANCE													
SIP-MP3-QA			No	No	No	No			No	Yes	No		No	Yes B8
TRACKING & IMPLEMENTS TS SURVEILLANCE	QSD SURVEILLANCE													
ACR 03304	1		Yes	No	No	No			No	No	No	LABEL	No	No
LABEL DISCREPANCY ON CVCS MOV	MB2 SHOWS "CLOSE-AUTO-OPEN" V													
ACR 06323	2212A	1	Yes	No	No	No			No	No	No		No	No C3
CONTAINMENT PEAK LOADING MAY BE EXCEEDED	MOCK-UP TEST ONGOING - OPERA													
ACR 01173	3301	2	No	No	No	No	NCR		No	No	No		No	Yes C10
RCP TO GASKETS	NCR 393-1113 NOT ADDRESSED BY													
ACR 02645	3301	1	No	No	No	Yes			No	No	No		No	No
VALVE STEM/DISC SEPARATION	BACKSEATING VLVS AND POSSIBLE													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 03007	3301	2	Yes	No	No	No		No	No	No		No	No	
BOLT FAILURE DUE TO CORROSION	POSSIBLE WRONG MATERIAL FOR A													
ACR 04128	3301	1	No	No	No	No	INPUT	No	No	No	INPUT	No	No	
INCORRECT RCS FLOW RATE SURV. TIME	± INPUT SURV. TIME FOR 4 (VS. REQ'D													
ACR 04886	3301	1	No	Yes	No	No		No	Yes	No		No	Yes	B8
SP TESTING INCONSISTENT W/IST PROG.	≡ TECH SPEC AMENDMENT													
ACR 06336	3301	1	Yes	No	No	Yes		No	No	No		No	No	
D RCP SEAL HOUSING LEAKING	VENDOR JOINT DESIGN PROBLEM													
ACR 06349	3301	1	No	No	No	No		No	No	No		No	Yes	C2
FFERENCE BETWEEN DESIGN AND FIELD SPLICE TYPE FO	PAPER PROBLEM - SPLICE FUNCTIO													
ACR 06602	3301	1	No	No	No	No		No	No	Yes		No	No	
SURVEILLNCE FOR PORV BLOCK VALVE WRONG	COULD HAVE RESULTED IN FLOW P													
ACR 06604	3301	1	Yes	No	No	No		No	No	No		No	No	
DRAWING DISCREPANCY RES. AS-BUILT CONDITION FOR RC	NO FUNCTION IMPACT													
ACR 07266	3301	2	Yes	No	No	Yes	HISTO	No	No	No		No	No	
RCP SEAL BOLT DEGREDATION	HISTORY OF THESE PROBLEMS - EC													
ACR 07729	3301	2	No	Yes	No	No		No	No	Yes		No	Yes	C1
A DCR RETEST REVISED BY WORK PLANNING WITHOUT ENGI	PROCESS ISSUE NO IMPACT ON PH													
ACR 08838	3301	2	No	No	No	No		es	No	No		No	Yes	C11
FSAR NOT PROPERLY TRANSLATED INOT CHEMISTRY CABLE	RESULTED IN INSUFFICIENT TESTIN													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u> ⁺	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>	
<u>Deficiency</u>	<u>Notes</u>														
ACR 10351	3301	1&2	Yes	No	No	No									
LOOP ISOLATION TIME LIMIT EXCEEDED	es No No No No REQUIRED CLARIFYING TRM AND TS														
PIR 3-86-148	3301	1	No	No	No	No									
RX TRIP: LOW S/G LEVEL	es No No ERROR No No 30 DAY LER														
PIR 3-87-059	3301	1	Yes	No	No	Yes									
PZR SAFETY VALVE SETPOINTS LOW	No No No No No HISTORICAL DRIFT ISSUE														
PIR 3-88-007	3301	1	No	Yes	No	No								Yes	B3
RCP OIL COLLECTION SYSTEM DOCUMENTATION INADEQUA	No No No No No SEISMIC DESIGN ISSUE														
PIR 3-88-021	3301	1	Yes	No	No	Yes								No	No
VEST. ANALYSIS - SG TUBE RUPTURE	No No No No No POTENTIAL USQ														
PIR 3-88-094	3301	1	Yes	No	No	Yes								No	No
RCP TURNING VANE BOLTS CRACKED	No No No No No														
PIR 3-88-88	3301		No	No	No	No	CYCLE							No	No
RX DIDN'T GO CRITICAL AS CALCULATED	No No No No No CALCULATION ERROR BY ENGR.														
PIR 3-88-89	3301		No	No	No	No								No	No
2 BJ'S REMOVED WITHOUT AUTHORIZATION	es No No ADMIN No No ADMINISTRATIVE PROBLEM														
PIR 3-90-091	3301	1	Yes	No	No	No								No	Yes
COPPS ALARM DESIGN INCORRECT	No No No No No DOESN'T FUNCTION AS INTENDED														
PIR 3-92-171	3301	1	No	No	No	Yes								No	Yes
WRONG MATERIAL FOR PORV GASKETS	No No No No No EQ ISSUE														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-93-217	3301	1	No	Yes	No	No		No	No	No		No	No	
FOREIGN OBJECT IN CORE SUPPORT PLATE	LOCKING CUPS LOOSE													
PIR 3-93-242	3301	1	No	No	No	No		No	No	No		No	Yes	C11
RCP INTENALS PAPERWORK MISSING	VIOLATED ACP 5.01													
PIR 3-93-308	3301	1	No	Yes	No	Yes		No	No	No		No	Yes	B11
RCS FLOW LIMITS OUT OF SPEC	REPLACED RCPS													
PIR 3-93-349	3301	1	No	No	Yes	No		No	No	No		No	Yes	C11
IST PERFORMED WITHOUT SIGN-OFF														
PIR 3-94-005	3301	1	No	Yes	No	Yes		No	No	No		No	No	
RCS RTD TEMP HIGHER THAN ASSUMED IN EQ LIFE	INDUSTRY PROBLEM													
PIR 3-94-118	3301	1	No	No	No	No		No	No	Yes		No	No	*
RX HEAD VENT VALVES TEST INADEQUATE	PROCEDURE CHANGED TO PERFOR													
PIR 3-94-137	3301	1	No	Yes	No	Yes		No	No	No		No	No	
RCP TVCS-SEABROOK INFO	DROVE NEW JCO													
PIR 3-94-192	3301	1	Yes	No	No	No		No	No	No		No	No	
RCS PRESSURE BOUNDARY LEAKAGE	CONSTRUCTION WELD													
PIR 3-94-193	3301	1	No	No	No	No		es	No	No		No	No	
RCP #3 SEAL LEAKOFF INSTALLED IMPROPERLY	AWO/MATE POOR PROBLEM													
QS-93-130	3301	2	No	No	Yes	No		No	No	No		No	No	
AWO PKG CONTAINED WRONG PROCEDURE	QSD SURVEILLANCE													

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<u>Deficiency</u>	<u>Notes</u>													
UNKNOWN1	3301	1	No	No	No	No		No	No	No		No	Yes	
FAILED TO GET SIGNATURE ON AWD FOR RCP SEAL HOUSIN	ISI FAILURE TO FOLLOW PROCEDUR													
UNKNOWN1	3301	1	No	No	No	No		No	No	No		No	Yes	
FAILED TO GET ANTI SIGNATURE ON AWD FOR RCP SEAL HO	ISI FAILURE TO FOLLOW PROCEDUR													
VG-87	3301	1	Yes	No	No	No	BASIS	No	No	No		No	No	
WHAT LIMITS RCS-02 VALVE TO 27 PSI DELTA IN CLOSING DIR	BASIS QUESTION PER DESIGN ASSU													
VG-92	3301	1	Yes	Yes	No	No	DESIG	No	No	No	DESIG	No	No	
CCP SYSTEM WALKDOWN ITEMS	TEMPERATURE ISSUE AND EXCURSI													
VG-94	3301	1	Yes	No	No	No	DESIG	No	No	No	DESIG	No	No	
CCP SYSTEM TEMPERATURE ISSUES	ESSENTIALLY SAME ISSUE AS VG-92													
ACR 06331	3301A	1	Yes	No	No	No		es	No	No		No	No	
NEW FUEL ASSEMBLIES DROP POTENTIAL HIGHER THAN ASS	DEPT. PROCEDURE NOT COMPLIAN													
ACR 09329	3301A	1	No	No	No	No	PROC	es	No	No		No	No	
RV HEAD LIFT LOAD PATH UNSPECIFIED	PROC NOT COMPARED AGAINST FS													
ACR 09330	3301A	1	No	No	No	No	PROC	es	No	No		No	No	
RV HEAD LIFT LOAD PATH UNSPECIFIED	SAME AS ACR 09329													
AR 9502483	3301A	1	No	No	No	Yes		No	No	No		No	No	
PZR BUBBLE COLLAPSE TEMPERATURE	ISEG REPORT													
AR 9502484	3301A	1	No	No	No	Yes		No	No	No		No	No	
THERMAL STRESS ON PZR SURGE LINE NOZZLE	ISEG REPORT													

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<u>Deficiency</u>	<u>Notes</u>													
PIR 3-91-206	3301A		Yes	No	No	Yes		No	No	No		No	No	
PZR SAFETY VLV SETPOINT DRIFT	HISTORIC ISSUE													
PIR 3-91-224	3301A	1	No	No	No	No		No	Yes	No		No	Yes	B11
"B" RHR PUMP OPERATED WITHOUT VALID SURVEILLANCE	SURV. NOT PERFORMED													
PIR 3-93-240	3301A	1	No	No	Yes	No		No	No	No		No	Yes	C11
MISSED RECEIPT INSPECTICN RCP MOTOR	OWNERSHIP UNCLEAR													
PIR 3-94-253	3301A	1	No	No	No	Yes		No	No	No		No	No	
INCORRECT BURNUP ASSUMPTIONS	VENDOR ERROR													
PIR 3-88-188	3302	3	Yes	No	No	No		No	No	No		No	Yes	B11
ROD DRIVES WOULDN'T RESET	EQUIPMENT MISALIGNMENT													
PIR 3-88-203	3302		Yes	No	No	Yes		No	No	No		No	Yes	B11
POTENTIAL CONTROL ROD FAILURE	HAFNIUM HYDRIDING													
AR 9500906	3303	4	Yes	No	No	No		No	No	No		No	No	
IMPROVE REFUEL EQUIPMENT OPERATION	ISEG REPORT													
PIR 3-88-211	3303	4	No	No	Yes	No		No	No	No		No	Yes	C11
AWO WORKED WITHOUT AUTHORIZATION	PERSONNEL ERROR													
PIR 3-89-069	3303A	4	No	No	Yes	No		No	No	No		No	No	
SFP BRIDGE CRANE CABLE BREAK	POOR CABLE ROUTING													
ACR 00223	3304	1	Yes	No	No	No		No	No	No		No	Yes	C1
BJ ATTACHED TO OPS CRIT DRAWINGS & NOT INSTALLED	BJ LOG SHOULD NOT INSTALLED BU													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>IS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 00261	3304	1	No	No	No	No	UNK	No	No	No		No	No	
BORIC ACID PUMP FAILED TO STOP														
ACR 04216	3304	1	Yes	No	No	No		No	No	No	SYSTE	No	Yes	
BORIC ACID TRANSFER PUMP FAILED TO STOP NOTE NOT FOLLOWED IN OPS PROC														
PIR 3-141-88	3304		No	Yes	No	No		No	No	No		No	Yes	
NEW RECORDERS INSTALLED PRIOR TO APPROVAL OF PDCE 3-129-88														
PIR 3-86-214	3304	1	No	No	No	No		es	No	No	VLV FA	No	No	
INADVERTENT BORATION @ 100% POWER VLV CLOSED TOO EARLY														
PIR 3-94-025	3304	2	No	No	No	Yes		No	No	No		No	No	
BORIC ACID PPS SUPPORT PLATES BOLTS WRONG ORG SHIPMENT FROM VENDOR INC														
PIR 3-94-259	3304	1	No	No	Yes	No		es	No	No		No	Yes C*	
CHS FLOW ORIFICES BACKWARDS S/U INSTALLATION AFTER FLUSH														
PIR 3-94-289	3304	1	No	No	No	No	DESIG	No	No	No		No	No	
AUTO M/U SYSTEM MALFUNCTION REPETITIVE LOGIC PROBLEMS														
PIR 3-95-007	3304	1	No	Yes	Yes	No		No	No	No		No	No C1	
HOOK VENTS INSTALLED ON UNSPECIFIED LINES PDCR NOT CLEAR, NOT A PROBLEM														
ACR 03440	3304A	1	Yes	No	No	No		No	No	No		No	No	
SOCKET WELD LEAK DUE TO FATIGUE RESONANCE CAUSE ISSUE														
ACR 05231	3304A	2	No	No	No	No	UNK	No	No	No		No	No	
ALTERNATE DILUTE VALVE WENT OPEN WHEN PUT INTO AUT														

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<u>Deficiency</u>	<u>Notes</u>													
ACR 07214	3304A	1	No	Yes	No	No		No	No	No		No	Yes	C9
MINOR FSAR ERRORS NOT AFFECTING FUNCTION														
FSAR DETAIL ACCURACY														
E94-004	3304A	1	Yes	Yes	No	No		No	No	No		No	Yes	B3
BABT HEATER DESIGN INADEQUATE														
ISEG REPORT: SECT 5.2.9														
NA 12529	3304A	1	No	No	No	No		No	Yes	No		No	No	
SURVEILLANCE ALLOWED TO LAPSE														
PIR 3-88-209	3304A	1	No	No	No	No		es	No	No		No	Yes	B11
INADEQUATE TESTING - PROC. DEFICIENCY														
30 DAY LER														
PIR 3-93-058	3304A		No	No	No	No		es	No	No		No	Yes	C11
UNADVERTENT OP CHANGE														
AWAITING ENGINEERING EVAL														
PIR 3-93-232	3304A	1	No	Yes	No	No		No	No	No		No	Yes	C1
INCORRECT SPARE WIRE HEAD VENT VALVES														
ACR 00261	3304C	2	No	No	No	No		No	No	No		No	No	
BORIC ACID PUMP FAILED TO STOP														
ISOLATOR FAILURE - BURNED OUT														
ACR 00675	3304C	2	Yes	No	No	No		No	No	No		No	No	
BORIC ACID PUMP 3CHS*PZASTART W/O CAUSE														
SPURIOUS START														
ACR 00834	3304C	2	No	No	No	Yes		No	No	No		No	No	
BORIC ACID PUMP FAILURE TO STOP														
SPRING PRECLUDES PROPER OPER														
ACR 01743	3304C	2	No	No	Yes	No		No	No	No	CAL	No	Yes	B5
BORIC ACID MAKEUP INCORRECT														
VALVE STROKE ISSUE														

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<u>Deficiency</u>	<u>Notes</u>													
ACR 01743	3304C	2	No	No	No	No		No	No	No	CAL	No	No	
BORIC ACID MAKEUP INCORRECT	VALVE STROKE SET IMPROPERLY													
ACR 02868	3304C	2	No	No	Yes	No		No	No	No		No	Yes	C1
FLANGE "A" SW TRAIN INSTALLED W/O BJ	MODIFIED EXISTING AWO WITHOUT													
PIR 3-91-153	3304C	2	No	No	No	Yes		No	No	No		No	Yes	C11
OVERLOAD HEATERS NOT REINSTALLED AFTER MAINT.	PERSONNEL ERROR													
ACR 02860	3305	2	No	No	No	No	INST E	No	No	No		No	Yes	
PIPE SULPPOINT IMPROPERLY LOCATED	DISCOVERED DURING SYSTEM WAL													
ACR 05029	3305	2	Yes	No	No	No		No	No	No		No	Yes	B9
FUEL STORAGE IN SFP	FULL CORE OFF LOAD ISSUE ON MP													
ACR 06102	3305	2	Yes	No	No	No		No	No	No		No	No	
SFP ANTI-SYPHON HOLE SIZE SUSPECT	BASED ON JUDGEMENT -- DID CALC;													
PIR 3-95-028	3305	2	No	No	No	No		No	No	No	MEPL	No	Yes	B6 C
INSTALLED NON QA SEAL QA LISTED APPLICATION	MEPL WRONG													
	3306	1	Yes	No	No	Yes		es	No	No	PROC	No	No	C3
	OPS PROCEDURE NOT REVISED													
ACR 00159	3306	1	Yes	No	No	Yes		No	No	No		No	Yes	B3
RSS TEMP. TRANSIENT BEYOND DESIGN BASIS	RSS PRESSURE BOUNDARY FAILUR													
ACR 06627	3306	1	Yes	No	No	No		No	No	No		No	No	
INSTRUMENT SET POINTS NON-CONSERVATIVE DUE TO CAL	ISOLATED CALCULATION ERROR-NO													

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<u>Deficiency</u>	<u>Notes</u>													
ACR 09496	3306	1	Yes	No	No	No	MOV G	es	No	No		No	Yes	C3
CALCULATION USED WRONG														
ACR 10561	3306	1	Yes	No	No	No		No	No	No		No	No	
RSS TEMPERATURE ISSUE PIPING STRESS -- 50.54 ISSUE - PARTLY CALCULATION														
ACR 10781	3306	1	Yes	No	No	No		No	No	No		No	No	
CALCUALTION DIDNT TAKE INTO ACCOUNT A PREVIOUS MOD NO FUNCTION IMPACT START-UP RE														
ACR 12862	3306	1	Yes	No	No	No		No	No	No		No	Yes	B3
MOV THRUST CALC REVIEW INCREASED RSS TEMP CHANGE IN CALC ASSUMPTIONS														
PIR 3-86-140	3306	1	No	No	No	No	PM	No	No	No		No	No	
IMPROPER VALVE POSITION INDICATION LIMIT SWITCH PROBLEM														
PIR 3-88-054	3306	1	No	Yes	Yes	No		No	No	No		No	No	
NON-COMPLIANCE WITH EQ REQUIREMENTS INCORRECT MODEL XMTRS INSTALL														
PIR 3-92-036	3306	1	No	No	No	No		No	No	No		No	Yes	C11
AWOS WORKED WITHOUT OPS AUTHORIZATION PERSONNEL ERROR														
PIR 3-94-290	3306	1	Yes	No	No	No		No	No	No		No	No	
RSS HX NOT ANALYZED FOR 100 PSI (SUPPORT) (NEED TO CHECK OD)														
PIR 3-95-034	3306	1	Yes	No	No	No		No	No	No		No	No	
RSS HX OUTLET PIPING STRESS ANALYSIS TEMP TO LOW MAY HAVE BEEN S/U RELATED														
ACR 03013	3307A	1	Yes	No	No	Yes		No	No	No		No	Yes	B5
MOV MOTOR TERMINAL BLOCKS NOT EQ QUALIFIED LIMITORQUE TERMINAL BLOCKS														

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<u>Deficiency</u>	<u>Notes</u>													
ACR 04899	3307A	1	Yes	No	No	No		No	No	No		No	Yes	
SIT PIPING DIFFERS FROM DRAWING	ISOMETRIC DIFFERS FROM ACTUAL													
E94-004	3307A	1	Yes	No	No	No		No	No	No		No	Yes	B3
RWST TRIP ON LOW TEMPERATURE	ISEG REPORT: SECT 5.3.4													
PIR 3-87-007	3307A	1	Yes	No	No	No		No	Yes	No	LOCK	No	Yes	B5
INCORRECT SI ACCUMULATOR SETPOINTS	PROCEDURE REVIEW													
PIR 3-91-225	3307A	1	No	No	Yes	No		No	No	No		No	Yes	C11
UNQUALIFIED VALVE IN CLASS II SYSTEM	PERSONNEL ERROR													
ACR 13217	3307B	1	Yes	No	No	No		No	Yes	No		No	Yes	B3
3HR PUMP TRIP ON LONG TERM RECIRC	HIGH SUMP TEMP FOUND VIA SIMUL													
ACR 09477	3307C	1	No	No	No	No		No	No	No		No	Yes	
BJ CLOSE-OUT DID NOT CHANGE OP	OPERATION ADMINISTRATION ERRO													
ACR 08897	3308	1	Yes	No	No	No		No	No	No		No	No	
POTENTIAL CLOGGING OF BCCS THROTTLE VALVES	ANALYZED TO BE OKAY - ORIGINAL													
ACR 09357	3308	1	Yes	No	No	No		No	No	No		No	No	
MINOR DRAWING ERROR	NO FUNCTIONAL IMPACT													
ACR 10356	3308	1	Yes	No	No	No		No	No	Yes		No	No	
MINOR P&ID DRAWING PHYSICAL LOCATION DESCRIPTION DI	NO FUNCTIONAL IMPACT													
ACR 10776	3308	1	No	Yes	No	No		No	No	No		No	No	
THERMAL RELIEF CALCULATION ERROR	FAILED TO REVISE CALCULATION													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7607</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-88-097	3308		No	No	No	No		No	No	No	WORK	No	No	
BLANK FLANGE REMOVED WITHOUT BJ AUTHORIZATION	ISOLATED PERSONNEL ERROR													
PIR 3-89-042	3308	1	No	No	No	No		No	Yes	No		No	Yes	B8
TORQUE SWITCH SETTING CHANGED	NO ISI CONCURRENCE													
PIR 3-91-146	3308	1	No	No	Yes	No		No	No	No		No	Yes	C1
VOTES RETEST NOT PERFORMED	PERSONNEL ERROR													
PIR 3-94-075	3308	1	No	No	No	No		No	No	Yes		No	No	*
ESF RESPONSE TIME NOT ALL INCLUDED														
VG-12	3308	1	No	Yes	No	No	DESIG	No	No	No		No	Yes	C1
RELIEF VALVES AND IMPACT OF RAISED SETPOINT	QUESTION ON ACCEPTABILITY OF C													
ACR 04525	3309	1	No	No	No	No		No	No	Yes		No	No	
VALVE SLAMMED SHUT DURING SURVEILLANCE	WATER HAMMER PROBLEM													
ACR 04897	3309	1	No	No	No	No		No	No	Yes		No	No	
USE OF PROPER VLVS TO THROTTLE QSS	WRONG VLVS USED - PROCEDURE													
ACR 07743	3309	1	No	Yes	No	No		No	No	No		No	No	C1
PDCR FAILED TO SPECIFY MCC LABELING UPDATES	PDCR DIDNT GO FAR ENOUGH WITH													
E94-004	3309	1	Yes	No	No	No		No	No	No		No	Yes	B5
CAT ISOLATION VALVE LEAKAGE	ISEG REPORT: SECT 5.2.7													
PIR 3-91-114	3309		No	No	No	No		es	No	Yes	ADMIN	No	No	
MISSED LLRT AFTER MOV TORQUE SWITCH REPLACEMENT	ADMIN PROCESS PROBLEM													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-94-128	3309		No	No	No	No		No	No	Yes		No	No	*
NOT TESTING PER FSAR	PROCEDURE NOT WRITTEN PER ORI													
PIR 3-94-301	3309	1	No	Yes	No	Yes		No	No	No		No	No	-3
CORE ANALYSIS USED NON CONSERVATIVE RWST ING VOLU	VENDOR ERROR INTERPERTING TA													
PIR 3-93-060	3310A	1	Yes	No	No	Yes		No	No	No		No	Yes	B11
CCP VALVE EXCEEDED STROKE TIME LIMITS	ACTUATORS @ END OF LIFE													
PIR 3-94-139	3310A	1	No	No	No	No		es	No	No		No	Yes	B*
WRONG MATERIAL USED FOR YOKE BOLTS	PROCEDURE MADE WRONG ASSUM													
ACR 07344	3311A	4	No	Yes	No	No		No	No	No		No	Yes	C1
PDCR RELEASED TO OPS NOT FULLY IMPLEMENTED	MINOR MINUS OF DELETION OF ANN													
PIR 3-92-192	3311A	4	No	Yes	No	No		No	No	No		No	Yes	C1
EQ CONDUIT SEAL INSTALLATION INVALID	PDCR USED WRONG SEALS													
ACR 10864	3311B	4	Yes	No	No	No		No	No	No		No	No	
DRAWING DISCREPANCY	NO FUNCTIONAL IMPACT													
ACR 07188	3311C	2	Yes	No	Yes	No		No	No	No		No	No	
INDICATOR LIGHT WIRING WRONG	AS BUILT ORIGINAL CONDITION; DR													
ACR 08601	3311C	4	No	Yes	No	No		No	Yes	No		No	Yes	
VENDOR CALIBRATION SPECIFICATION NOT MET	CONTROL OF VENDOR OIM REQUIR													
ACR 12857	3311C	2	Yes	No	No	No		No	No	No		No	No	
H2 TESTS GAS BOTTLES IN H1 RAD AREA	NOT ACCESSIBLE POST ACCIDENT													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-94-267	3311C	2	No	No	No	No		No	No	No	PE	No	Yes	C*
RETAINING CLIPS NOT REPLACED	PERSONNEL ERROR													
ACR 02228	3311E		No	No	Yes	No		No	No	No		No	Yes	C2
VIOLATED DCN REQUIREMENT RE: CABLE SUPPORT	SUPPORTED MULTIPLE CABLES VIA													
PIR 3-88-061	3311E	4	Yes	No	No	Yes		No	No	No		No	Yes	C5
INCOMPLETE EQ QUAL PACKAGES	NRC EQ AUDIT DISCOVERED													
PIR 3-88-091	3311E		No	No	No	No		No	No	No		No	No	
CONTAINMENT EQ TEMP HIGH FOLLOWING UNIT STARTUP	FAILED TEMP MONITOR													
PIR 3-88-117	3311E		Yes	No	No	No		No	No	No		No	No	
CONTAINMENT TEMPERATURE >120 FOR 8 HOURS	PGS CUBICLE LICENSE AMENDMENT													
PIR 3-88-129	3311E		Yes	No	No	No		No	No	No		No	No	
CONTAINMENT TEMP ABOVE EQ LIMIT	PGS CUBICLE LICENSE AMENDMENT													
PIR 3-88-153	3311E		Yes	No	No	No		No	No	No		No	No	
CONTAINMENT EQ TEMP PROFILE WAS TOO CONSERVATIVE	SUBMITTED LICENSE AMENDMENT													
PIR 3-90-088	3311E	4	No	No	No	No		No	Yes	No		No	Yes	C11
EQ TEMPS NOT RECORDED ON ROUNDS	PERSONNEL ERROR													
ACR 01149	3312A	1	Yes	No	No	Yes	AE	No	No	No		No	Yes	B6
CTMT EQT HATCH COMPONENTS NOT SHOWN AS CAT I	ORIGINAL MEPL EVAL SHOWS SOME													
ACR 01725	3312A	1	No	No	No	No		No	Yes	No		No	Yes	B8
CTMT TS REQUIREMENTS CONFLICT	TS SUBSECTIONS CONFLICT WITH E													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 06569	3312A	1	No	No	No	No		No	No	No		No	Yes	C5
INCONSISTENT VALVE STROKE TIME ACCEPTANCE CRITERIA INCOMPLETE OF ISI PROGRAM														
PIR 3-86-151	3312C	2	Yes	No	No	No		No	Yes	Yes		No	No	
RAD MONITOR SETPOINT DATA BASE CHANGE ERROR SETPOINTS NOT IAW SP														
ACR 04580	3313A	2	Yes	No	No	No		No	No	No		No	Yes	
DISCREPANCY BETWEEN EE AND ESK DRAWINGS LAMP CAME ON PEST-RELAMPING;														
ACR 04877	3313A	2	No	Yes	No	No		No	No	No		No	Yes	C9
DISCREPANCIES BETWEEN DRAWINGS & FSAR ADDRESS RG 1.47 ISSUES AS FSAR														
ACR 12339	3313A	2	No	No	No	No	EQ	No	No	No		No	Yes	
EQ 10 YEAR EQUIPMENT INSPECTION MISSED EQ PROGRAM/MAINTENANCE/WORK														
PIR 3-91-101	3313A		Yes	No	No	No		No	Yes	Yes		No	No	
TECH SPEC FLOW SURVEILLANCE TEST PENDING TECH SPEC CHANGE ADM														
PIR 3-94-065	3313A	2	No	No	No	Yes		No	No	No		No	No	
SHEAR PIN MISSING ON RECOMBINER FLANGE NEVER INSTALLED; PROCEDURE FO														
PIR 3-88-159	3314		No	No	No	No		No	No	No		No	Yes	
BJ REMOVED WITHOUT AUTHORIZATION BJ COMPLICATED BY MULTIPLE FUN														
ACR 00237	3314A	2	No	No	No	Yes		No	No	No		No	No	
FAN TRIP DUE TO DAMPER FAILURE FAILED DUE TO HYDRAMOTOR PLAT														
ACR 04195	3314A	2	No	Yes	No	No		No	No	No		No	Yes	B1
TRM ISSUE ON AUX BLDG HEATER AVAILABLE WHAT SURVEILLANCE INSURES AVA														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 05272	3314A	2	No	Yes	No	No		No	No	No		No	Yes	B5
DISCREPANCY BETWEEN CALC & AIR FLOW TEST	FAN SP CALLS FOR LOWER FLOW W													
E94-004	3314A	2	No	Yes	No	No	SLCRS	No	No	No		No	No	
OPERATION OF AUX BLDG FANS: SLCRS	ISEG REPORT: SECT 5.2.2													
PIR 3-86-156	3314A		Yes	No	No	No		No	Yes	Yes		No	No	
FAN FAILED TO START	BREAKER TRIP RESET BUTTON FA'L													
PIR 3-86-160	3314A		No	Yes	Yes	No		No	No	No		No	Yes	C1
INTERMITTENT GROUND	WIRE CUT INADVERTENTLY PDCR I													
PIR 3-91-166	3314A	2	No	No	Yes	No		No	Yes	No		No	No	
OTH SLCRS FILTERS OOS: FIRE DAMPER REPAIR	30 DAY LER													
PIR 3-91-211	3314A	2	No	No	No	No	EEQ	No	No	No		No	Yes	C11
EQ: FIC FLOW SWITCH CAL DONE LATE	PERSONNEL ERROR													
NA 12012	3314C	2	No	No	No	No		No	No	No		No	No	
FUEL HANDLING BUILDING VENT SYSTEM TEST INCORRECT	FAILED TO TEST SYSTEM IN ACCIDE													
ACR 00161	3314D	2	Yes	No	No	No		No	No	No		No	Yes	C1
FAN CIRCUITRY NOT CONSISTENT WITH LOGIC DRAWINGS	POTENTIAL IEEE-279-1971 NON-COM													
ACR 10532	3314D	4	Yes	No	No	No		No	No	No		No	No	
WIRE LANDED ON INCORRECT TERMINAL	DRAWING ERROR													
PIR 3-95-041	3314D		es	No	No	No		No	No	Yes		No	No	
FAN CIRCUIT DID NOT REQUIRE STEP AT EQUIP LEVEL	NOT PICKED UP IN S/U PROGRAM													

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<u>Deficiency</u>	<u>Notes</u>													
ACR 04970	3314F	2	No	No	No	No		No	Yes	No		No	Yes	B8
TECH SPEC INTERPRETATION: CONTROL BLDG AC	HVK CHILLER OPERABILITY ISSUE													
ACR 05207	3314F	2	Yes	No	No	No		No	No	No	LABEL	No	No	
EXCUTCHEON ON CONTROL SWITCH NOT SAME AS DRAWIN	MB2 SHOWS CLOSE "AUTO" "OPEN"													
ACR 07363	3314F	2	No	Yes	No	No		No	No	No		No	Yes	C2
FSAR DOES NOT REFLECT MODIFICATION CHANGES	DCW CLOSURE PROBLEMS													
ACR 08843	3314F	2	Yes	No	No	No		No	No	No		No	No	
FSAR & TECH SPEC FLOW RATE NOT IN AGREEMENT	MINIMUM & MAXIMUM FLOWS NOT S													
ACR 10585	3314F	2	No	No	No	No		es	No	No	MAINT.	No	No	
CAFFOLDING HAS POTENTIAL PROBLEM	ANALYZED OKAY - UPGRADED LATE													
ACR 63630	3314F	2	Yes	No	No	No		No	No	No		No	No	
DESIGN DRAWING DISCREPENY	NO FUNCTIONAL IMPACT -- DRAWIN													
PIR 3-86-158	3314F	2	Yes	No	No	Yes		No	No	No		No	Yes	C11
PARTITION PLATE BOLT FAILURE														
PIR 3-86-165	3314F	2	No	No	No	Yes	PM	No	No	No		No	No	
CONTROL ROOM VENTILATION CBI	HIGH CHLORINE PROBE FAILED													
PIR 3-86-190	3314F	2	No	No	Yes	No		No	No	No		No	No	
CONTROL ROOM PRESURE ENVELOPE BREACHED	INFO UNAVAILABLE FAILURE CAUSE													
PIR 3-89-002	3314F	2	No	No	Yes	No		No	No	No		No	Yes	C11
VALVE WIRED INCORRECTLY														

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-91-123	3314F	2	No	No	No	Yes		No	No	No		No	No	
SPURIOUS CONTRL BLDG ISOLATION SIGNAL	POWER SUPPLY FAILURE													
PIR 3-91-162	3314F		Yes	No	No	No		No	No	No		No	Yes	B11
HX FOULED WITH MUSSELS INOP	CHLORINATION SYSTEM DEFICIENCY													
PIR 3-92-343	3314F	2	No	Yes	No	No		No	No	No		No	Yes	C11
AWO RELEASED WITHOUT AUTHORIZATION	PERSONNEL ERROR													
ACR 05193	3314H	1	No	Yes	No	No		No	No	No		No	No	
EDG ALARM SETPOINT NOT CHANGED ON TIME	SETPOINT CHANGED @ DIFFERENT													
ACR 00224	3314I	2	No	No	No	Yes		No	No	No		No	Yes	
I PROPER FUSE IN RAD MONITOR	APPEARS WRONG FUSE INSTALLED													
ACR 01727	3314I	2	No	No	No	No		No	No	Yes		No	Yes	
WRONG SAMPLE FLOW CONVERSION FACTOR	DATA ENTERED INCORRECTLY-EQT.													
I92	3314I	2	Yes	No	No	No		No	No	No		Yes	No	
ENGINEERING TIMELINESS, NOTES SLCRS DEFICIENCY NOTE	CAUSE OF S/D													
I93	3314I	2	Yes	No	No	No		No	No	No		No	No	
SLCRS WORK AROUND ON FAN STARTS REDUCING AVAILABI	LONG TERM EQUIP PROBLEMS													
N9507	3314I	2	No	No	No	No		No	No	No	MAINT	No	No	
SLCRS INOP ROOF PLUG REMOVED	RCP MOTOR REPLACEMENT													
PIR 3-86-155	3314I	2	Yes	No	No	No		No	No	Yes		No	No	
SLCRS BACKDRAFT DAMPER FAILURE	DAMPER NOT FULLY OPEN													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-86-195	3314I	2	No	Yes	Yes	No		No	No	No		No	No	
BREACH OF SLCRS BOUNDARY	CABLE LACKING SEAL													
PIR 3-86-246	3314I	2	Yes	No	No	No		No	No	No		No	Yes	B3
SLCRS FAILED SURVEILLANCE	INADEQUATE DESIGN													
PIR 3-88-013	3314I	2	No	Yes	No	No		No	Yes	No		No	Yes	C11
BJ INSTALLED WITHOUT AUTHORIZATION	VIOLATED TS FIRE BOUNDARY													
PIR 3-91-108	3314I		No	No	No	No		es	No	No	ADMIN	No	No	
SLCRS BOUNDARY BREACHED WITHOUT AWO	ADMINISTRATIVE PROBLEM													
PIR 3-91-151	3314I	2	No	No	Yes	No		No	No	No		No	Yes	C11
OTH TRAINS INOP: ACCESS COVER REMOVED	PERSONNEL ERROR													
PIR 3-91-158	3314I		Yes	No	No	No		No	No	No		No	Yes	B5
"A" SLCRS FILTER FAILS FLOW TEST	FUSIBLE LINK FAILED DESIGN DEFIC													
PIR 3-92-052	3314I	2	No	No	Yes	No		No	No	No		No	Yes	C11
SLCRS BOUNDARY BREACH	SLCRS BOOTS MISSING													
PIR 3-94-291	3315B	4	No	No	No	No		No	No	No		No	Yes	C*
STEM BUSHING MISSING ON MOD	LOOKS LIKE WARD ISSUE													
ACR 04887	3315E	1	Yes	No	No	No		No	No	No		No	Yes	B2
OPS CRIT DRAWING DOESNT REFLECT AS BUILT STATUS	AUX BOILER VENTILATION: IVS 2 AO													
ACR 01821	3316A	1	Yes	No	No	No		No	No	No		No	No	
"A" MSIV FAILURE TO OPEN	PART STROKE TEST FAILURE													

<u>Source</u>	<u>Sys</u> <u>no</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 02854	3316A	1	No	Yes	No	No		No	No	No		No	Yes	C2
DCN'S NOT PROCESSED PROPERLY	SIGNED OFF SYSTEM NOT TURNED													
ACR 05742	3316A	1	Yes	No	No	Yes		No	No	No		No	No	
MSIV TEST SOLENOID 4A FAILED ON SURVEILLANCE TEST	RELATES TO VENDOR APPLICATION													
ACR 06322	3316A	1	Yes	No	No	No		es	No	No		No	Yes	
MSIV ZERO CLOSED POSITION INDICATION QUESTIONED	CALIBRATION PROCEDURE DEFICIE													
ACR 08777	3316A	1	No	No	No	No	PROC	es	No	No		No	Yes	
PROCEDURE OMITTED VENDOR INFO	INFO LOST IN PROCEDURE REWRIT													
ACR 09377	3316A	1	Yes	No	No	No		No	No	No		No	No	
MINOR DRAWING DISCREPANCIES	NO FUNCTIONAL IMPACT													
ACR 10325	3316A	1	Yes	No	Yes	No		No	No	No		No	No	
WIRE IN MOV CIRCUIT NOT LANDED	WIRE NOT LANDED-GL 89-10 FLOW													
PIR 3-86-139	3316A	1	No	No	Yes	No		No	No	Yes	CAL	No	No	
MSS VALVE TRIP	LEVEL SWITCH CALIBRATION													
PIR 3-86-222	3316A	1	No	No	No	No	CARD	No	No	No		No	No	
STEAM FLOW INDICATOR MISMATCH	POWER SUPPLY VOLTAGE DRIFT													
PIR 3-86-239	3316A	1	No	No	Yes	No		No	No	No		No	Yes	C11
INSUFFICIENT TAGGING - EQUIPMENT CYCLED	AWO CONTROL													
PIR 3-87-072	3316A	1	No	Yes	No	No		No	Yes	Yes		No	No	
MSIV STROKE TIME EXCEEDS TS LIMITS	N2 ASSIST NOT CREDITED IN MODE													

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<u>Deficiency</u>	<u>Notes</u>													
PIR 3-90-047	3316A		Yes	Yes	No	No		No	No	No		No	No	
MAIN STEAM RELIEF VALVES NOT ASME SEC XI INSTALLED	CODE RECONCILIATION IN ERROR													
PIR 3-92-033	3316A	1	No	No	No	No		es	Yes	No		No	Yes	C11
S/G FED WITH LOW TEMPERATURE WATER	PERSONNEL ERROR													
PIR 3-93-244	3316A	1	No	No	Yes	No		No	No	No		No	Yes	C11
BI REMOVED WITHOUT AUTHORIZATION	IMF ERROR:SCAFFOLD REMOVAL													
PIR 3-94-010	3316A	1	Yes	No	No	Yes		No	No	No		No	No	*
MSIV PARTIAL STROKE TIME	GL91-18 QUESTION													
PIR 3-94-038	3316A	1	Yes	No	No	Yes		No	No	No		No	No	
X TRIP SETPOINTS WITH INOP SPRS SAFETIME NONCONSE	INDUSTRY ISSUE													
PIR 3-94-115	3316A	1	No	No	No	No		No	No	Yes		No	No	
"C:" MSIV PART STROKE FAILURE														
PIR 3-94-157	3316A	1	Yes	No	No	Yes		No	No	No		No	No	
"C" MSIV PART STROKE FAILURE														
PIR 3-94-185	3316A	1	Yes	No	No	Yes		No	No	Yes		No	No	
'C' MSIV FAILED CLOSED	RX TRIP													
PIR 3-94-207	3316A	1	No	No	No	No		No	Yes	Yes		No	No	B*
MSIV TS INADEQUATE TO SUPPURT MODE CHANGE	VALVES PREVIOUSLY CONSIDERED													
PIR 3-94-282	3316A	1	Yes	No	No	Yes		No	No	No		No	No	
'C' MSIV PART STROKE FAILURE	REPETITIVE PROBLEM													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org. Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-94-284	3316A	1	No	No	No	No				es	No	No	No	Yes C*
MSIV PART STROKE FAILURE	ADMIN CONTROL													
QS-93-110	3316A	1	No	No	No	No				es	No	No	No	No
SNUBBER INSPECTION PROCEDURE DEFICIENCY	QSD SURVEILLANCE													
VG-100	3316A	1	No	Yes	Yes	Yes	383 FL	No	No	No	VENDO	No	No	
CONTROLOTRON CABLE FIRE RATING	RELATES TO USE OF NON-383 QUALI													
PIR 3-91-106	3316C		No	No	No	No				No	No	No	No	No
GENERATOR PIPE ACCIDENTALLY BENT	ISOLATED WORKER ERROR													
ACR 07493	3317	4	No	Yes	Yes	No				No	No	No	No	Yes C2
ICN NOT OPERATED PROPERLY FOR VENT LINE	WORK PROVEN FAILURE													
E94-004	3317	4	Yes	No	No	No				No	No	No	No	No
MSR PCV VALVE TRIM INADEQUATE	ISEG REPORT: SECT 5.3.1													
PIR 3-86-167	3317	3	Yes	No	No	No				No	No	No	No	Yes B3
INSTRUMENT CABLE INSULATION FAILURE	EXCESSIVE HEAT													
PIR 3-88-090	3317		Yes	No	No	No				No	No	No	No	No
DSM WELD CRACK	HIGH STRESS DUE TO ORIG. DESIG													
ACR 06286	3318	4	Yes	No	No	No				No	No	No	No	No
WIRES NOT LANDED ON NON RETURN VALVE	FIELD ERROR IN RECONNECTION O													
PIR 3-91-191	3318	4	No	No	Yes	No				No	No	No	No	Yes C11
PURGE BAG SMOKING BORING PIPE WELDING	PERSONNEL ERROR													

<u>Source</u>	<u>Sys. No</u>	<u>Group</u>	<u>Org. Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 00806	3319A	3	No	No	No	No	I&C CA	No	No	Yes		No	Yes	
COMPENSATING WIRE IMPROPERLY LANDED	ERROR CAUSED TEMPERATURE FL													
ACR 03171	3319A	3	Yes	No	No	No		No	No	No		No	Yes	
TEMPORARY HANGERS LEFT ON CONDENSATE PIPING	LEFT IN SINCE ORIGINAL CONSTRU													
ACR 00677	3319C	4	No	No	No	No		No	No	No		No	Yes	C4
CNO EFFICIENT RM:TS VS SAFETY EVAL	TS SURV AND SAFETY EVAL DISCRE													
PIR 3-94-161	3319C	4	No	No	No	No		es	No	No		No	Yes	B5
WRONG FUSES IN NOT VITIAL MCC	PROGRAM DID NOT COVER													
VG-158	3319C	1	No	Yes	No	No	BASIS	No	No	No	DESIG	No	No	
IAS DIAPHRAGM COMPLETELY REMOVED FROM DWST	QUESTION ON CERTAINTY OF REMO													
ACR 05755	3320	1	Yes	No	No	No		No	No	No		No	No	
OPERATING FATIGUE FAILURE	NOT DESIGN RELATED													
PIR 3-92-025	3320	4	No	No	No	No		No	No	No		No	Yes	C11
AWO CANCELLED, TAGS CLEARED: JOB STILL WORKING	PERSONNEL ERROR													
PIR 3-88-228	3321	2	Yes	No	No	No	MEPL	No	No	No		No	Yes	B11
NON QA PARTS IN QA SYSTEM	MEPL EVAC REVISED													
PIR 3-92-187	3321	1	Yes	No	No	No		No	No	No		No	No	
FEEDWATER HEATER OSCILLATION DOWNPOWER														
PIR 3-93-238	3321	1	No	No	No	No		es	No	No		No	Yes	C11
RED AND BLUE TAGS ON SAME COMPONENTS	TAGGING ON SAME EQUIPMENT													

Source	Sys No	Group	Org Design	Mod	Field	Vend	Other	DP	TS	Test	Other Ops	BL	PP	ACR 7007
Deficiency	Notes													
PIR 3-94-024	3321	1	Yes	No	No	No		No	No	No		No	No	
FW ISOL MAY HAVE DEGRADED WITHOUT BEING DETECTED	S/U TESTING (FOUND IN 1989)													
ACR 02862	3321A	1	Yes	No	No	No		No	No	No		No	Yes	B3
PIPE SUPPORT LOADS EXCEED DB LIMITS	FOUND DURING CK VLV LEAKAGE E													
ACR 03022	3321A	1	No	Yes	No	No		No	No	No		No	Yes	C7
PRESSURE ALARM SWITCH DIFFERS FROM DRAWING	SRIE PROCEDURE NOT FOLLOWED													
ACR 03631	3321A	1	Yes	No	No	No		No	No	No		No	No	
FEED WATER CHECK VALVE BACK LEAKAGE	PENETRATION COOLING ISSUE													
ACR 04499	3321A	1	No	Yes	No	No		No	No	No		No	Yes	B1
VALVE LABELS INCONSISTENT WITH P&ID DRAWINGS	FEEDWATER LEAK INSTRUMENTS													
ACR 04524	3321A	1	Yes	No	No	No		No	No	No		No	No	
CHECK VLV BACK LEAKAGE	PENETRATION COOLING ISSUE													
ACR 06348	3321A	1	No	Yes	No	No		No	No	No		No	Yes	C2
QUESTION ON FLEX TUBING EVALUATION ON STWR LEVEL IN	CONFUSION ONLY - DOCUMENT CLA													
ACR 12502	3321A	1	No	Yes	No	No		No	No	No		No	No	C1
CABLE DOESN'T MEET FLAME RETARDANCY REQUIREMENT	ACCEPTED VENDOR CABLE WITHOU													
AR 9500515	3321A	1	Yes	No	No	No		No	No	No		No	No	
MSIV STROKE TIME PROBLEMS	ISEG REPORT													
E94-004	3321A	1	Yes	No	No	Yes		No	No	No		No	No	
FW ISOL. VALVE STROKE TIME	ISEG REPORT: SECT 5.2.5													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-86-171	3321A	1	No	No	No	No								
WATER HAMMER LCV FAILURE	es No No No Yes B11 OPS PROCEDURAL INADEQUACY													
PIR 3-92-026	3321A	1	No	No	No	No								
AWO ACCEPTED WITHOUT RETEST AND TAG CLEARANCE	No No No No Yes C11 PERSONNEL ERROR/PROC NOT CLR													
ACR 00294	3322	1	No	No	No	No	CK VL							
AFW CK VLV NOT IN IST PROGRAM	No Yes No No No FSAR VS TS INCONSISTENCY													
ACR 02858	3322	1	No	Yes	No	No								
DCN ON DWST DID NOT LIST DOING AS OPS CRIT	No No No No Yes C3 REMOVED DIAPHRAGHM FROM DWS													
ACR 03264	3322	1	No	No	No	No								
CK VLV BACKLEAKAGE OVERHEATS AFW LINE	No No No CK VLV No No													
ACR 03265	3322	1	No	No	No	No								
LEAKING AFW CK VLVS	No No No No No HISTORICAL BACK LEAKAGE - CTMT													
ACR 05287	3322	1	Yes	No	No	No								
QA DESIGNATION ON VALVE LABELS	No No No No Yes B6 WALK DOWN SHOWED VALVES AS Q													
ACR 06945	3322	1	No	No	No	No								
SURVEILLANCE PROCEDURE NOT CONSERVATIVE	No No Yes No No TRM REQUIREMENT NOT SATISFIED													
ACR 07737	3322	7	Yes	No	No	No								
DESIGN LEADING EXCEEDED ON PIPE SUPPORT	No No No No No OPERABLE - CUMMULATIVE EFFECT													
ACR 08907	3322	1	No	Yes	No	No								
DISCREPANCY BETWEEN FSAR AND CALCULATION	No No No No No C8													

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<u>Deficiency</u>	<u>Notes</u>													
ACR 08912	3322	1	Yes	No	No	No			es	No	No	No	No	C2
DISCREPANCY BETWEEN DBTP AND TECHNICAL SPECIFICATION	IST OKAY PAPER ISSUE - C9 ALSO A													
ACR 10774	3322	1	Yes	No	No	No			No	No	No	No	No	
AFW FCV ISOLATION CAPABILITY DEFICIENCY	50.54 ISSUE- ORIGINAL DESIGN													
ACR 10780	3322	1	Yes	No	No	No			No	Yes	No	No	No	
TTAFW VALVE SHEET TO TEST MDAFW	50.54 ISSUE													
ACR 10790	3322	1	Yes	No	No	No			No	No	Yes	S/E	No	Yes C11
TT & MDAFW PUMP PRE-LUBE NOT PERFORMED OER VENDOR	NO COORDINATOR BETWEEN SURV													
ACR 10803	3322	1	No	No	No	No			No	No	No	I&C TS	No	Yes
PROCEDURE CHANGE RESULTS IN TECHNICAL SPECIFICATION	LACK OF OVERLAP IN TP REVIEWS													
AR 9500515	3322	1	Yes	No	No	No			No	No	No	No	No	No
TERRY TURBINE STEAM SUPPLY VALVES	ISEG REPORT													
E94-004	3322	1	Yes	No	No	No			No	No	No	No	No	No
AUX FEED PIPE SUPPORTS: HELB ISSUE	ISEG REPORT: SECT 5.2.6													
PIR 3-86-136	3322	1	No	No	No	Yes			No	No	No	No	No	No
AUX FEED FLOW CAL FAILURE	MANUFACTURING DEFECT													
PIR 3-88-057	3322	1	Yes	No	No	No			No	No	No	No	Yes	C5
CABLE SEPARATION CRITERIA VIOLATION	NRC EQ AUDIT DISCOVERED													
PIR 3-88-105	3322	1	Yes	No	No	Yes			No	No	No	No	No	No
VENDOR NOTICE ON SCC ON AFW PUMPS	NO IMPACT ON MP3													

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<u>Deficiency</u>	<u>Notes</u>													
PIR 3-88-213	3323C	3	No	No	Yes	No		No	No	No		No	Yes	C11
BJ REMOVAL WITHOUT AUTHORIZATION	TEMPORARY GAUGES REMOVED													
PIR 3-91-139	3323C	3	No	No	Yes	No		No	No	No		No	Yes	C11
1ST RESET MALFUNCTIONS	SHEARED EHC CAMSHAFT PIN													
ACR 10384	3323D		No	No	No	No		es	No	No		No	Yes	C9
FSAR SYSTEM FUNCTIONAL DESCRIPTION DISCREPENCY	NO FUNCTIONAL IMPACT													
PIR 3-86-147	3324A	4	No	No	No	Yes		No	No	Yes		No	Yes	C11
MAIN GENERATOR OVER VOLTAGE	PROTECTION SYSTEM RESET - BJ IS													
PIR 3-92-324	3324C	4	No	No	No	No		No	No	No	YES	No	Yes	C11
ALVE FOUND CLOSED	PROC. VIOLATED													
ACR 08612	3325A	2	No	Yes	No	Yes		No	No	No		No	No	
CWP BEARING TEMPARUTURE ELEMENT CABLES LANDED IN	DOCUMENTATION CLARIFIED													
ACR 08642	3325A	2	No	No	No	No	START	No	No	No		No	Yes	
SHIPPING SLEEVE LEFT ON RTD	ORIGINAL STARTUP CONFIGURATIO													
AR 9502672	3325A	2	No	Yes	No	No		No	No	No		No	Yes	B9
CIRC WATER TEMPERING LINE USE	ISEG REPORT													
AR 9504769	3325A	2	No	Yes	No	No		es	Yes	No		No	Yes	B9
INCREASE IN UHS TEMPERATURE	ISEG REPORT													
PIR 3-86-146	3325A	4	Yes	No	No	No		No	No	No		No	Yes	B11
MULTIPLE CIRC WATER PUMP TRIFS	INADEQUATE LUBE WATER													

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<u>Deficiency</u>	<u>Notes</u>													
PIR 3-86-229	3325A	2	Yes	No	No	No				No	No	No	No	No
CIRC PUMP TRIP LOW LUBE WATER	PDCR WRITTEN TO REMOVE TRIP													
ACR 01849	3325C	4	Yes	No	No	Yes				No	No	No	No	No
3CCPXP1A OUTBOARD AIR DEFLECTOR LOOSE	ORIGINAL GE MOTOR DESIGN PROB													
ACR 03293	3325C	4	Yes	No	No	Yes				No	No	No	No	No
AIR DEFLECTOR LOOSE:CCP MOTOR	SEE ALSO ACR 01809													
ACR 00831	3326	1	No	No	No	No	RFO M		No	No	No	No	No	No
AO FLOW IN "C" CCP HX SW LINE	VALVE OPERATOR MISPOSITIONED													
ACR 01201	3326	1	No	No	No	No			No	No	Yes	No	Yes	
ED WRONG AWO FOR VE-2 INSPECTION	VIOLATED C-WPC-2 REQUIREMENT													
ACR 02279	3326	1	No	No	No	No	PMMS		No	No	Yes	No	Yes	
USED WRONG VALVE MFGR FOR TEST INFO	PMMS DID NOT REFLECT LATEST VA													
ACR 02635	3326	1	No	Yes	No	No			No	No	No	No	Yes	C1
PLANT CHANGE INITIATED VIA DCN VS PDCR														
ACR 02855	3326	1	No	No	Yes	No			No	No	No	No	Yes	C10
STRUCTURAL QUALIF OF EXPANSION JOINTS LACKS DETAIL	TIE ROD QUALIFICATIONS SUSPECT													
ACR 02990	3326	1	No	No	Yes	No			No	No	No	No	No	
SW PUMP VALVE WOULD NOT STROKE OPEN	AWO PERFORMED; MISLANDED LEA													
ACR 05292	3326	1	No	No	Yes	No			No	No	No	No	Yes	
DAMAGED SW FLANGE NUTS														

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<u>Deficiency</u>	<u>Notes</u>													
ACR 08317	3326	1	No	Yes	Yes	No		No	No	No		No	No	C1
MOV OPERATOR INSTALLED BACKWORDS	FIELD ERROR IN BJ INVESTIGATION													
ACR 10782	3326	1	No	Yes	No	No		es	No	No		No	Yes	C1
BJ REQUIRES OPERATOR ACTION YET NO PROCEDURES IN P														
ACR 10787	3326	1	No	Yes	Yes	No		No	No	No		No	Yes	C1
CABLES NOT IN	IS! ENGINEER DIDNT COMMUNICATE													
ACR 10795	3326	1	No	Yes	No	No		No	No	No		No	No	
BJ DEFEATED AUTO START FEATURES	ISOLATED DESIGN ERROR													
ACR 11321	3326	1	No	Yes	No	No		No	No	Yes		No	Yes	C1
FAILURE TO DERIVE PROPER SURVEILLANCE LIMITS BASED	PDCR SHOULD HAVE ATTEND PROC													
N95-11	3326	1	No	Yes	No	No		No	No	No		No	Yes	C1
MOV CONTROL MOD NOT VERIFIED	INADEQUATE PDCR													
PIR 3-86-153	3326	1	Yes	No	No	No		No	No	No		No	No	
FOREIGN MATERIAL FOUND IN CCPHX	RUBBER SW LINER MATERIAL													
PIR 3-88-152	3326		No	Yes	Yes	Yes		No	No	No		No	No	
TUBE LEAK ON CCP: INCORRECT RELIEF VALVE	TEMP. VLV. INST. WRONG CONSTR.													
PIR 3-90-097	3326		Yes	No	No	No		No	No	No		No	Yes	B11
HX EROSION	DIVIDER PLATE HOLE													
PIR 3-90-139	3326		No	No	No	No		es	No	No	ADMIN	No	No	
WRONG WELD WIRE USED	ADMINISTRATIVE PROBLEMS													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-91-090	3326	1	Yes	No	No	No		No	No	No		No	No	
SWP DISCHARGE EXPANSION JOINT	POOR APPLICATIONS OF MATERIAL													
PIR 3-91-171	3326	1	Yes	No	No	No		No	No	No		No	No	
SERVICE WATER SYSTEM MUSSEL FOULING	UNIT SHUTDOWN													
PIR 3-91-209	3326	1	Yes	No	No	No		No	No	No		No	Yes	B5
CORROSION OF SERVICE WATER VALVES	RUBBER LINING SEPARATED													
PIR 3-91-220	3326	1	No	Yes	No	No		No	No	No		No	Yes	B11
SW PUMP SUPPORT BOLTS OVER TORQUED	MAINT PROC ISSUE													
PIR 3-92-037	3326	1	No	Yes	Yes	No		No	No	No		No	Yes	C11
NO ASME XI INSP PLAN ON AWOS	PERSONNEL ERROR													
PIR 3-92-168	3326	1	Yes	No	No	No		No	No	No		No	No	
MUSSELS FOUND IN CCP HX	INADEQUATE CHLORINATION													
PIR 3-92-179	3326	1	Yes	No	No	No		No	No	No		No	No	
"A" EDG EXPANSION JOINT FAILURE	WELD SEAM PITTING - MONEL													
PIR 3-93-057	3326	1	No	No	No	No		No	No	No	YES	No	No	
MUSSELS FOUND IN CCP HX	OLD RESIDUE SUSPECTED													
PIR 3-93-066	3326	1	No	No	No	No		No	No	No		No	No	
RED TAG HUNG ON WRONG EQUIPMENT	PERSONNEL ERROR													
PIR 3-94-066	3326	1	No	No	Yes	No		No	No	No		No	No	
BOLT MISSING ON BASE PLATE	NO WORK HAD BEEN PERFORMED S													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-94-067	3326	1	No	No	No	No			es	No	No	No	No	No *
PIPE NIPPLE & CAP USED IN LIEU OF PLUG ON OIL DRAIN	CONG CHANGE BY ERROR. PROCE													
PIR 3-94-182	3326	1	Yes	Yes	No	Yes			No	No	No	No	No	No B3
PIPE HANGER IMPROPERLY ANALYZED	CODE WRONG DUE TO PERSONNEL													
PIR 3-94-234	3326	1	No	Yes	No	No			No	Yes	No	No	No	No C*
IST SURVEILLANCE NOT CONSERVATIVE WITH SUPPORT TO	POORLY X MITTED INFO													
PIR 3-94-235	3326	1	No	No	No	No			No	No	No	No	Yes	C*
BOLTING NOT AS ASSUMED IN HVR/ACU COILS														
PIR 3-94-243	3326	1	No	No	No	No			es	No	Yes	No	No	No
IOV TEST ACCEPTANCE CRITERIA ERROR	ACCEPTANCE CRITERIA ERROR/PR													
PIR 3-95-005	3326	1	No	Yes	No	No			No	No	No	No	Yes	B2
DRAWING ERROR/LACK OF VERIFICATION	DRAWING ERROR NOT CAUGHT DU													
PIR-3-88-04	3326	1	Yes	No	No	Yes			No	No	No	No	No	No
VALVE STEM ADAPTOR CAN DISENGAGE SELF	POTENTIAL MOV FAILURE													
QS-93-022	3326	1	No	Yes	Yes	No			No	No	No	No	Yes	C1
INADEQUATE DIRECTION IN AWO	QSD SURVEILLANCE													
VG-106	3326	1	Yes	Yes	No	No	REVISI		No	No	No	DESIG	No	Yes C1
APPENDIX R ISSUE WITH SWP*MOV130 VALVES	PDCR NOT ACCEPTED BY PORC DU													
VG-144	3326	1	Yes	No	No	No			No	Yes	No	No	Yes	C8
SWP DISCHARGE VALVE NOT IN TECH SPEC	QUESTION ON BASIS FOR VALVES N													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
VG-146	3326	1	Yes	No	No	No	AS-BUI	No	No	No		No	Yes	C2
DRAWING DISCREPANCY ON SERVICE WATER BACKWASH FE	DRAWINGS CONFLICT WITH ONE AN													
ACR 04561	3327	3	No	Yes	No	No		No	No	No		No	Yes	B1
CONTROLLED DRAWING DOCUMENTATION INADEQUATE	LOGIC DIAGRAM DOESNT SHOW HO													
ACR 08803	3327	4	No	Yes	No	No		No	No	No		No	Yes	
DRAWING DISCREPANCY	CORRECTED DRAWINGS													
PIR 3-86-184	3327	4	Yes	No	No	No		es	No	No		No	No	
HIGH DP W/O PUMP TRIP	STICKING SWITCH													
PIR 3-86-223	3327	4	No	No	Yes	No		No	No	No		No	No	
SCREENWASH EXPANSION JOINT FAILURE	EQUIPMENT GROUNDS													
PIR 3-92-330	3327	3	No	Yes	Yes	No		No	No	No		No	Yes	B2
ONE LINE DRAWING HAS WRONG INFO	UPDATE WITH WRONG INFO													
E94-004	3328	4	Yes	No	No	No		No	No	No		No	Yes	B3
MUSSEL FOULING; HYPOCHLORITE SYSTEM DESIGN	ISEG REPORT: SECT 5.2.11													
PIR 3-86-143	3328		No	No	No	No	PM	No	No	No		No	Yes	C11
CTMT BLDG ISOLATION SIGNALAL	HIGH CHLORINE - DETECTOR FAILE													
ACR 12231	3329	4	Yes	No	No	No		No	No	No		No	No	
DESIGN INCORRECT RELATIVE TO INDICATING OF VALVE PO	STATUS NOT CLEAR AT THIS TIME													
ACR 01162	3330A		No	No	No	Yes		No	No	No		No	Yes	
EQ LEVEL SWITCHES NOT REPLACED ON TIME	LONG VENDOR LEAD TIME FOR PAR													

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<u>Deficiency</u>	<u>Notes</u>													
ACR 04888	3330A	1	Yes	No	No	No		No	No	No		No	Yes	B3
CONTROLLER SETPOINTS DIFFER FROM CALC SETPOINTS	SETPOING CONFIGURATION CONTR													
ACR 07187	3330A	1	Yes	No	No	Yes		No	No	No		No	No	
CCP MOTOR AIR DEFLECTOR DAMAGE	POOR VENDOR DESIGN													
ACR 08425	3330A	1	Yes	No	No	No	MUST	No	No	No		No	No	
CCP PIPING TEMPERATURES LIMIT EXCEEDED	UNREASONABLE DESIGN LIMITATIO													
PIR 3-91-170	3330A	1	Yes	No	No	No		No	No	No		No	Yes	B3
"B" HX INOP: MUSSEL FOULING	HIGH DP													
PIR 3-91-172	3330A	1	Yes	No	No	No		No	No	No		No	Yes	B3
C" HX INOP: MUSSEL FOULING	HIGH DP													
PIR 3-92-340	3330A	1	Yes	No	No	No		No	No	No	VLV	No	Yes	B11
RPCCW NSR PIPE HDR CRACK	EXCESS VIBRATION: THROTTLING V													
PIR 3-94-287	3330A		No	No	No	No		No	No	No		No	Yes	C*
RUBBER PLUGS LEFT IN CCP HX FROM														
ACR 04569	3330B	4	Yes	No	No	No		No	No	No		No	Yes	
VALVES INSTALLED IN REVERSE	WRONG VALVE FOR SERVICE ALSO													
PIR 3-93-331	3330B	4	Yes	No	No	No		No	No	No		No	No	
FAILED BUSHING TACK WELD: 3-CCS-D113	FOUND DURING PUMP REPAIR													
ACR 06594	3330C	4	No	No	No	No		No	No	No		No	Yes	C5
LO LEVEL CONLS NO INSTALLED PER IEQ	NO INPACT ON FUNCTION													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 09466	3330C	4	Yes	No	Yes	No	MAINT	No	No	No		No	No	
WIRE LANDED ON INCORRECT TERMINAL														
PIR 3-94-232	3330C	4	Yes	No	No	Yes		No	No	No		No	No	
CDS CHILLER KEEPS TRIPPING REQUIRED DESIGN CHANGE														
ACR 00015	3331A	4	No	Yes	No	No		es	No	No		No	Yes	C1
AUX BOILER SYSTEM VLVS. MISPLACED REQ'D PROCEDURE CHANGES NOT I														
E94-004	3331A	4	Yes	No	No	No		No	No	No		No	Yes	B3
AUX STEAM RELIEF VLV IS UNDERSIZED ISEG REPORT: SECT 5.2.10														
PIR 3-92-057	3331A	4	No	No	No	No		No	No	No		No	Yes	C1
VX CONDENSATE NOT SAMPLED IAW BJ PERSONNEL ERROR														
PIR 3-88-099	3331D		Yes	No	Yes	No		No	No	No		No	No	
STARTUP STRAINER NOT REMOVED ISOLATED ERROR														
PIR 3-94-226	3331D	4?	No	Yes	No	No		No	No	No		No	Yes	C2
HOT WATER HEATING VLVS WIRED A VICE B DCH IMPLEMENTATION														
ACR 05291	3331E	4	Yes	No	No	No		No	No	No		No	Yes	
AUX BOILER DESIGN DRAWNG DISCREPANCIES NU OWNGS VS VENDOR DWNGS														
ACR 08437	3331F	4	Yes	No	No	No		No	No	No		No	No	
BOLTING WITH INSUFFICIENT ENGAGEMENT USED														
ACR 00635	3332A	2	No	No	Yes	No		No	No	No		No	No	C7
DESIGN CHANGE CANCELED - AWO LEFT OPEN RIE NOT INCLUDED IN AWO PACKAG														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 02630	3332A	2	Yes	No	No	No	ORIGI	No	No	No		No	Yes	
ACTUATOR GREASE SHIPPING CAP NOT REMOVED														
ACR 09355	3332A	2	Yes	No	No	No		No	No	No		No	No	
MINOR DRAWING ERROR NO FUNCTIONAL IMPACT														
E94-004	3332A	2	Yes	No	No	No		No	No	No		No	Yes	B
NON-SEISMIC INSTRUMENT AIR LINES ISEG REPORT: SECT 5.2.4														
E94-004	3332A	2	Yes	No	No	No		No	No	No		Yes	No	
AIR COMPRESSORE DESIGN DEFICIENCY 3332A ISEG REPORT: SECT 5.2.1														
PIR 3-88-86	3332A		Yes	No	No	No		No	No	No		No	No	
AS SUPPLY HEADER CRACK CORRECT BY MODIFICATION														
PIR 3-93-050	3332A	2	Yes	No	No	No		No	No	No		No	Yes	B3
INSTRUMENT AIR LEAK: SUPPORT FAILURE														
PIR 3-92-181	3332C	4	No	No	Yes	No		No	No	No		No	No	
BJ NOT APPROVED IN 14 DAYS PERSONNEL ERROR														
ACR 02706	3333	4	No	No	No	No		No	No	No		No	Yes	C1
GAS EOOS IV POOR CLOSED BEFORE AWO CLOSED INST. NOT CAL DUE TO AWO CLOSE														
ACR 06942	33358-	4	Yes	No	No	No		No	No	No		No	No	C2
CONTAINMENT SUMP PUMP P&ID DRAWING CONFUSED AS BUILT DRAWING ERROR														
ACR 05275	3335A		Yes	No	No	No		No	No	No		No	Yes	
PRIMARY DRAINS TRANSFER PUMP RELAY INCORRECT USE OF RE VS. RC RELAY														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-94-040	3335B		No	No	No	No						No	No	*
CONTAINMENT SUMP PP OPERATION NOT PER FSAR	PROCEDURE CHANGE NOT CONSIS													
ACR 13225	3335B-	4	No	Yes	No	No						No	Yes	B1
POWER SUPPLY TO "TEMPORARY" CONDENSOR SUMP PUM	USE PERMANENT POWER SUPPLY V													
ACR 05496	3336A	4	Yes	No	No	No						No	Yes	B3
1 1/2" PIPES THROUGH SW CUBICLE NOT FIRE RATED	FIBERGLAS PIPE NOT 3 HR FIRE RAT													
E94-004	3337	4	Yes	No	No	No						No	Yes	B5
WASTE GAS COMPRESSOR SETPOINTS IMPROPER	ISEG REPORT: SECT 5.3.2													
E94-004	3340C	4	No	No	No	No	VLV LE	No	No	No		No	No	
3P MW AUTO FILL FEATURE INOP	ISEG REPORT: SECT 5.2.8													
PIR 3-88-168	3341		Yes	No	Yes	No						No	No	
FIRE SEAL NOT IN PLACE	PART OF RECONCILIATION													
PIR 3-88-171	3341		Yes	No	Yes	No						No	No	
FIRE BOUNDARY PENETRATION NOT SEALED	CONSTRUCTION ISSUE													
PIR 3-89-018	3341	4	Yes	No	No	No						No	Yes	C11
PROPER FIRE SEAL NOT INSTALLED	PERSONNEL ERROR													
ACR 13220	33410	4	No	No	No	No						No	No	
FIRE DAMPER TESTING NOT DONE	NOT TESTED UNTIL SAFETY EVALS I													
ACR 08568	3341A	4	Yes	No	No	No						No	No	
AS BUILT ERROR FOUND IN EDG SUPPRESION DRAWING	MINOR DRAWING ORIGINAL ERROR													

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<u>Deficiency</u>	<u>Notes</u>													
ACR 08615	3341A	4	Yes	No	No	No		No	No	No		No	No	
WIRING ON SEC. TAMPER SWITCH NOT PER DRAWING	CLARIFIED WIRING													
UNKNOWN2	3341A	4	Yes	No	No	No		No	No	No		No	Yes	B10
FIREWATER P&id ERROR	P&ID=CAPS; PLANT USES 2 VLVS.													
UNKNOWN2	3341A	4	Yes	No	No	No		No	No	No		No	Yes	B10
FIREWATER P&ID ERROR														
AR 9504995	3341C	4	No	Yes	No	No	DOWN	No	No	No		No	No	
SIMPLEX RESTORATION ON CPU REBOOT	ISEG REPORT													
PIR 3-92-331	3341C	4	No	No	Yes	No		No	No	No		No	Yes	C11
WORK IN CO2 AREA W/O PERMIT	CO2 PERMIT NOT PICKED UP													
PIR 3-86-196	3341D	4	No	No	Yes	No		No	No	Yes		No	Yes	B11
FIRE ZONE PANEL WIRING ISSUES	ALARMS DISABLED PROC DEFICIEN													
PIR 3-91-130	3341D	4	No	No	No	No		No	No	No	UNK	No	No	
FAILED HEAT DETECTORS TURBINE BLDG VALVES	CAUSE UNKNOWN													
PIR 3-94-266	3341D	4	No	No	Yes	No		No	No	No		No	No	
FIRE SEALS MISSING	ORIGINAL INSTALLATION													
PIR 3-94-200	3342	3	No	No	No	No		No	No	No		No	Yes	B5
FUSE INCORRECT IN RCP MOTOR CKT	FUSE CONTROL ISSUE													
ACR 10519	3343	3	Yes	No	No	No		No	No	No		No	Yes	
FSAR PROTECTION SETTINGS NOT SAME AS FIELDL SETTING	START UP ISSUE													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 10525	3343	3	Yes	No	No	No		No	No	No		No	Yes	
CABLE TRAY FILL NOT IN ACCORDANCE WITH FSAR DESCRIP	START UP ISSUE													
PIR 3-87-075	3343	3	No	No	No	No	DRIFT	No	Yes	Yes		No	No	
4160V BUS TRIP SETPOINTS LTS LIMITS	30 DAY LER													
PIR 3-88-199	3343	1	Yes	No	No	No		No	No	No		No	Yes	B3
POTENTIAL DAMAGE TO VITAL BUS LOADS	30 DAY LER													
PIR 3-89-015	3343	1	No	No	No	No		No	No	No		No	Yes	B3
FAULT CURRENTS > DESIGN VALUES	PERSONNEL SAFETY ISSUE													
PIR 3-89-032	3343	1	No	No	No	No		No	No	Yes		No	Yes	B11
DUAL ACCEPTANCE CRITERIA IN SURV.	MISLEADING DATA SHEET													
VG-111	3343	1	Yes	No	Yes	No	SETPO	es	No	No	GENER	No	Yes	C1
CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEME	RELATES TO SCR VIA PDCRs AND F													
VG-112	3343	1	Yes	Yes	Yes	No	FILL C	es	No	No	DESIG	No	Yes	C1
K AND L SAFETY TRAY FILL CRITERIA	RELATES TO DISCREPANCY BETWE													
VG-142	3343	1	Yes	Yes	Yes	No	FILL C	es	No	No	DESIG	No	Yes	C1
CABLE TRAYS LOADED BEYOND FSAR LIMITS	SAME AS VG-112 ON FILL CRITERIA													
VG-149	3343	1	Yes	Yes	Yes	No	SETPO	No	No	No	DESIG	No	Yes	C1
ELECTRICAL PROTECTION CRITERIA NERMS AND FIELD SETT	RELATES TO DISCREPANCY BETWE													
ACR 07203	3344B	1	Yes	No	No	No		No	No	No		No	No	
BREAKER LABLES AT ODDS WITH ONE-LINE DAGRAMS	AS BUILT DRAWING LABEL PROBLE													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 09322	3344B	4	Yes	No	Yes	No		No	No	No		No	No	
NON SAFETY WIRING ERROR	DRAWING													
ACR 09334	3344B	4	No	No	No	No		No	No	No		No	No	
DRAWING ERROR PER FIELD CONDITION	CORRECTED DRAWING													
VG-107	3344B	1	Yes	Yes	Yes	No	RELAT	es	No	No	OPERA	No	Yes	
INTAKE STRUCTURE SUMP PUMP PLUGGED INTO VITAL REC	SIMPLE QUESTION ON CONTROL O													
VG-54	3344B	1	No	No	No	No		No	No	No		No	No	
SAME AS VG-107														
PIR 3-93-228	3345	4	No	No	No	No	UNK	No	No	No		No	No	
WRONG SIZE FUSE INSTALLED	CAUSE UNKNOWN													
PIR 3-86-189	3345A	4	No	No	No	No		es	No	No		No	No	
LOSS OF INVERTER 6	POWER SUPPLY ISSUE													
ACR 06948	3345C	1	No	No	No	No	RIE	No	No	No		No	No	C7
MEPL DOWNSGRADE INAPPROPRIATE DUE TO SEPARATIONS	ISOLATED ERROR													
ACR 12347	3345C	1	No	Yes	No	No		No	No	No		No	Yes	C1
DISCREPANCY BETWEEN OPS CRIT DRAWING AND FIELD CO	NO FUNCTIONAL IMPACT													
ACR 12846	3345C	1	Yes	No	No	No		No	No	No		No	Yes	
STATION BATTERY QUALIFIED LIFE EXPIRED EQ	SHOULD NOT BE ISSUE FOR "MILD"													
NA 12139	3345C	1	No	No	No	No		No	No	Yes		No	Yes	
NOV BATTERY TESTING DEFECIENCY	TEST NOT IAW DESIGN REQUIREME													

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<u>Deficiency</u>	<u>Notes</u>													
PIR 3-90-089	3345C	1	Yes	No	No	No		No	No	No		No	No	
BATTERY GROUND ON LIMIT SWITCH	CHANGED HYPOCHLORITE INS. PT.													
VG-104	3345D	4	Yes	No	No	No	BASIS	es	No	Yes	CAPAC	No	No	
IS BATTERY 6 CREDITED IS PSA	RELATES TO SAFETY IMPORTANCE													
VG-118	3345D	4	Yes	No	No	No		es	No	No	ELEC.	No	No	
BATTERY 6 SURVEILLANCE METHOD QUESTIONED	QUESTION RE ADAQUACY OF TEST													
ACR 00110	3346A	4	No	No	No	No	CAL E	No	No	No		No	No	
"A" CDG INTERCOOLER TEMP INDIC REVERSED	SENSING ELEMENTS REVERSED - A													
ACR 00722	3346A	4	No	No	Yes	No		No	No	No		No	No	
QA WORK DONE ON AWO SHORT FORM	USED WRONG AWO FOR QA WORK													
ACR 00724	3346A	1	No	No	No	No		No	No	No	BP NO	No	Yes	
SP COULDN'T BE DONE DUE TO MOD	E&DCR MOD PERFORMED; SP NOT													
ACR 00891	3346A		No	Yes	No	No		No	No	No		No	Yes	C1
OPS CRIT DRAWINGS NOT REDLINED	STORAGE P&IDS, REDLINED, REPLA													
ACR 01760	3346A	1	Yes	No	No	No		No	No	Yes		No	No	B3
SEQUENCER TIMING DISCREPANCY	MAY NOT RECOGNIZE LOP SIGNAL													
ACR 02392	3346A	1	No	No	Yes	No		No	No	No		No	Yes	
WRONG FUSES INSTALLED IN BREAKERS	STOCK CODE ERROR IN PART NUMB													
ACR 03628	3346A	1	Yes	No	No	No		No	Yes	No		No	Yes	B9
FSAR OB ISSUE; EDG STARTING AIR PRESSURE	CONFLICTS ON 5 START PARAMETE													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 10778	3346A	1	Yes	No	No	No		No	No	No		No	No	
FSAR DESCRIPTION HAS NO TOLERENCE ON JACKET WATER	CLARITY ISSUE - REVISE FSAR													
E94-004	3346A	1	Yes	No	No	No		No	No	No		No	No	
VOLTAGE REGULATOR POTENTIMETER OPERATION	ISEG REPORT: SECT 5.3.5													
IPE-95-011	3346A	1	No	No	No	No		es	No	No		No	Yes	C*
DIESEL STARTING AIR STUCK OPEN RUST	FSAR SYS NOT USED													
MP 3-92-333	3346A	1	No	No	No	No		No	No	No	PROC	No	Yes	C11
EOC RECIEVER NOT CROSS TIED														
PIR 3-87-016	3346A	1	No	No	Yes	No		No	Yes	Yes		No	No	
EDG START TIME > 10 SECONDS	MAINTENANCE ISSUE													
PIR 3-87-035	3346A	1	No	No	Yes	No		No	Yes	Yes		No	No	
EDG START TIME > 10 SECONDS	30 DAY LER													
PIR 3-88-207	3346A	1	No	No	No	No		No	No	Yes		No	Yes	B11
EDG SEQUENCER RELAY TESTING	INADEQUATE TESTS													
PIR 3-91-161	3346A	4	Yes	No	No	No		No	No	No		No	Yes	B11
HX FOULED WITH MUSSELS INOP														
PIR 3-91-167	3346A	4	Yes	No	No	No		No	No	No		No	Yes	B5
"A" EDG INOP: LOW RECEIVER PRESSURE	AIR COMPRESSOR MECHANICAL FAI													
PIR 3-91-184	3346A	1	Yes	No	No	No		No	No	No		No	No	
EDG INOP - MUSSEL FOULING														

Source	Sys No	Group	Org Design	Mod	Field	Vend	Other	DP	TS	Test	Other Ops	BL	PP	ACR 7007
Deficiency	Notes													
PIR 3-92-333	3346A	1	No	No	No	No		No	No	No	PROC	Yes	No	C11
EDG RECEIVER NOT CROSS-TIED	PROCEDURE COMPLIANCE													
PIR 3-94-012	3346A	4	No	No	Yes	No		No	No	Yes		No	No	
GAGES INSTALLED WRONG SINCE S/U	S/U ISSUE ON INITIAL TESTING													
PIR 3-94-016	3346A	1	No	No	No	No		es	No	No		No	No *	
EDG STARTING AIR DEGREDATION	AIR DRYER NOT USED CONSISTENT													
PIR 3-94-108	3346A	1	No	No	No	No		es	No	No		No	No *	
EDG KEEP RUNNING WHEN STOP SIGNAL GIVEN	DIESEL AIR DRYERS NOT USED FOR													
PIR 3-95-036	3346A	4	No	No	No	No		No	No	No	CA WR	No	No	
GAGES REVERSED ON INTER COOLER TEMPERATURE	INCORRECT CORRECTIVE ACTION													
E94-004	3346B	1	Yes	No	No	No		No	No	No		No	No	
DAY TANK LEVEL SWITCH	ISEG REPORT: SECT 5.4.1													
PIR 3-86-211	3346B	1	Yes	No	No	No		No	No	No		No	Yes B3	
SEISMIC EVAL QUESTIONED	SQRT AUDIT DISCOVERY													
PIR 3-94-124	3346B		Yes	No	No	Yes		No	No	No		No	No	
C EDG FO XFER PP DID NOT START LEVEL SWITCH PROBLEM	ON GOING PROBLEM SINCE S/U SWI													
VG-151	3346B	1	Yes	Yes	No	No	SETPO	No	No	No	DESIG	No	No	
EDG SETPOINTS	QUESTIONS ON RECENT PROBLEMS													
ACR 01862	3346C	2	No	Yes	No	No		No	No	No		No	Yes	
DRAWING ERROR OPS CRIT SBO D/G DWNG	BREAKER ON OPS CRIT DRAWING B													

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<u>Deficiency</u>	<u>Notes</u>													
AR 9500914	3346C	2	No	Yes	No	No		No	No	No		No	Yes	B5
SBO D/G VECTRA ISSUE CLOSE-OUT	ISEG REPORT													
SIP-MP3-P-9	3346C	2	No	No	No	No		No	No	No		No	Yes	C6
SBO DG - MEAL UPDATE NOT TIMELY	QSD SURVEILLANCE													
ACR 01867	3367A	1	No	No	No	No	WRON	No	No	No		No	Yes	
INCORRECT FUSE IN FUSE PANEL	FUSE CONTROL ISSUE, PERSONNEL													
ACR 03269	3367B	1	No	Yes	No	No		No	No	No		No	Yes	C1
INCOMPLETE INCORP OF CHANGES ON OPS FORM	PDCR NOT FULLY IMPLEMENTED													
ACR 01865	3367C	1	No	No	No	No	BJ CO	No	No	No		No	Yes	
JORK RELEASED CONFLICTED WITH BJ IN USE	BJ NOT SHOWN ON OPS CRIT DRAW													
ACR 02856	3398	1	No	Yes	No	No		No	No	No		No	Yes	C2
DCNS SIGNED OFF W/O MOV ENGINEER REVIEW	SIGNED OFF THROUGH FLS, W/O MO													
ACR 03555	3401	2	No	No	No	No	DATA	No	No	No		No	No	
IMPROPER DATA ENTRY INCORE SURV.	OPS SP 36023													
ACR 06610	3401	2	Yes	No	Yes	No		No	No	No		No	No	
SHUTDOWN MARGIN MONITOR LEVEL NOT PER DRAWING	WRONG POWER SUPPLY CONNECT													
ACR 12495	3401	2	No	Yes	No	No		No	No	No		No	Yes	C3
SETPOINT CALCULATION INADEQUATE IN THAT TURNOVER M														
PIR 3-58-104	3401		No	No	No	Yes		No	No	No		No	No	
POTENTIAL LEAKS IN CABLE ASSEMBLIES	VENDOR FIELD PROC. NA TO LIP3													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>	
<u>Deficiency</u>	<u>Notes</u>														
PIR 3-94-250	3401		No	No	No	Yes				es	No	Yes	No	No	C*
RCS FLOW XMITTER, OIL FILL MONITORING	ROSEMOUNT NEED PLUS AS WELL A														
PIR 3-89-061	3402	4	Yes	Yes	No	No				No	No	No	No	Yes	311
CTMT PENETRATION LEAKAGE DURING ILRT	FITTING LEAK														
PIR 3-90-115	3403		No	No	No	Yes				No	No	No	No	No	
MCC 32C HAS GROUND	ISOLATED COMPONENT FAILURE														
ACR 06637	3404	2	No	Yes	No	No				No	No	No	No	No	C9
FSAR DOES NOT CORRECTLY DESCRIBE REEL MONITOR FUN	FSAR UPDATE IN ERROR														
ACR 08584	3404	2	No	Yes	No	No				No	No	No	No	No	
SYSTEMS WOULD NOT FUCNTION AS DESIGNED	ISOLATED ERROR														
ACR 08609	3404	2	No	No	No	No				No	No	No	I&C	No	Yes C1
SETPOINT NOT TIMELY UPDATED	FTFP - DIDNT USE PROCESS														
ACR 12850	3404	2	No	Yes	No	No				No	No	No	No	Yes	C1
OPTICAL ISOLATOR CREDITED BUT NOT INSTALLED	E&DCR CREDITED DEVICE														
PIR 3-88-003	3404	2	Yes	No	No	Yes				No	No	No	No	No	
RAD MONITOR COMPUTER PROGRAM ERROR	10CFR21 NOTIFICATION														
PIR 3-89-065	3404	2	Yes	No	No	No				No	No	No	No	Yes	B11
RAD MONITOR MIS-LABELLED	IMPACTED SIMULATOR														
PIR 3-92-354	3404	2	No	No	No	No				No	No	No	PERS	No	Yes C11
WRONG VARIABLE RECORDED FOR FLOW	PERSONNEL ERROR														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>IS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 10862	3405	1	Yes	No	No	No		No	No	No		No	No	
DRAWING DISCREPANCIES														
PIR 3-90-084	3405	1	No	No	No	No		No	No	No	YES	No	No	
TEST CIRCUIT FAILURE SLAVE RELAY TESTING FAULTY PUSH BUTTON														
ACR 01761	3406	1	No	No	No	No	SPEC	No	No	No		No	Yes	B5
SPDS SPEC AND PROCESS COMPUTER CODES SPDS SPEC WAS NOT UPDATED AS														
ACR 06941	3406	1	No	No	No	No		No	No	No		No	No	C10
NCR FOR NON-CONF STUDS FAILED TO ADDRESS MODE 4 & NCR PROBLEM														
PIR 3-86-218	3406	1	Yes	No	No	Yes		No	No	Yes		No	Yes	C11
RTD LOOP TIME RESPONSE NOT MET INADEQUATE REVIEW OF VEND INF														
PIR 3-88-212	3406	1	No	No	No	No		No	Yes	No		No	Yes	B11
TS SURV MAY NOT MEET REQUIREMENTS ESFAS RESPONSE TIME TESTING														
ACR 08561	3407A	1	Yes	No	No	No		No	No	Yes		No	No	
FSAR IN ERROR ON RESPONSE TIME TESTING TIME SPEC. F ORIGINAL MISSED ASSUMPTION OR														
ACR 08562	3407A	1	No	No	No	No		No	Yes	No		No	No	
FSAR ERROR IN RESPONSE TIME TESTING - CONFLICT WITH CONFLICT BETWEEN TS AND FSAR														
ACR 08614	3407A	1	Yes	No	No	No		No	No	No		No	No	
SETPOINTS NON-CONSERVATIVE CORRECTED ORIGINAL CONNECTIO														
ACR 08623	3407A	1	Yes	No	No	No		No	No	No		No	No	
NON-CONSERVATIVE SETPOINT ORIGINAL														

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
QS-93-103	3407A	1	No	Yes	Yes	No		No	No	No		No	Yes	
AWOS NOT REVIEWED PROPERLY								QSD SURVEILLANCE						
QS-93-103	3407A	1	No	Yes	Yes	No		No	No	No		No	Yes	C1
NONCONFORMING MATERIAL INSTALLED								QSD SURVEILLANCE						
PIR 3-92-030	3408	4	No	No	No	No		No	No	No	POWR	No	Yes	B1
LOSS OF ANNUNCIATOR POWER TO MB-2								DEFECTIVE INVERTER						
ACR 08411	3410B	2	No	No	No	No		No	No	No		No	Yes	B1
NCR DISPOSITIONED WITHOUT GENERATION OF BJ TO ENSU								NO IMPACT TRACKING ISSUE - PPP						
ACR 10515	3412		No	No	No	No		No	No	No		No	No	
PM AS-BUILT CONDITION NOT ACCURATELY REFLECTED IN								SETPOINT ALSO NON-CONSERVATIV						
PIR 3-91-202	3413	4	No	No	No	Yes		No	Yes	No		No	No	
OPERABILITY OF SEISMIC MONITOR														
PIR 3-94-210	3413		No	No	No	No		es	No	Yes		No	No	B*
SIESMIC MONITOR ACCEPTANCE CRITERIA REVISED INCORR														
ACR 09362	3414	4	Yes	No	No	No		No	No	No		No	No	
MINOR DRAWING ERROR								NO FUNCTIONAL IMPACT						
PIR 3-88-135	3415		No	No	No	No		No	No	No	PERS	No	Yes	C11
WORKED ON WRONG ISOLATOR CABINET								PERSONNEL ERROR						
PIR 3-88-098	3416		Yes	No	No	Yes		No	No	No		No	No	
POTENTIAL FOR COMMON MODE ECC FAILURE								COMPUTER RESET ISSUE - MINOR P						

Source	Sys No	Group	Org Design	Mod	Field	Vend	Other	DP	TS	Test	Other Ops	BL	PP	ACR 7007
Deficiency	Notes													
E94-004	3466	1	Yes	No	No	No		No	No	No		No	No	
SSPS LOGIC CARDS NOT AS A SWITCH ISEG REPORT: SECT 5.2.11														
ACR 12854	3720A	4	No	Yes	No	No		No	No	No		No	Yes	B1
I&C BUILDING INADEQUATE POWER SUPPLY NOT BUILT PER SP-EE-076														
ACR 02281	3720B	4	No	No	No	No		No	No	Yes		No	Yes	
EMERGENCY LIGHTING TEST CRITERIA DEFICIENCY DOCKETED TESTS MAY BE INADEQU														
ACR 08820	3720B	1	No	No	Yes	No		No	No	No	MAINT	No	No	
BTP 9.5.1 LIGHTS NOT AIMED PROPERLY NOT ALLIGNED AFTER MAINTENANC														
ACR 08790	3900B	1	Yes	No	No	No		No	No	No		No	No	
RAWING AS BUILT ERROR NO FUNCTIONAL IMPACT (LABELING)														
PIR 3-92-031	3900B	4	Yes	Yes	Yes	No		No	No	No		No	Yes	C11
CHARGING PUMP ATTACHMENT PLATES REMOVAL PERSONNEL ERROR														
PIR 3-89-082	3900C	2	No	No	No	No		No	No	No		No	No	
SPENT FUEL BLDG INTEGRITY VIOLATED PERSONNEL ERROR														
ACR 04880	3900E	2	No	No	Yes	No		No	No	No		No	Yes	B1
SLCRS BOUNDARY BREACH - MISSING FIRE SEAL IMPORTANCE OF BOUNDARY UNKN														
ACR 04883	3900E	2	No	No	No	No	UNKN	No	No	No		No	Yes	
SLCRS BOUNDARY BREACH - MISSING FIRE SEAL SEE ACR 04880														
ACR 04884	3900E	2	Yes	No	No	No		No	No	No		No	Yes	B2
FIRE SEAL DESIGN INADEQUATE SEE ACR 04880														

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
PIR 3-92-191	3900E	2	No	No	No	No		No	No	No		No	Yes	C11
RED TAGGED VLV REMOVED FROM SERVICE	PERSONNEL ERROR													
ACR 00455	3900H	2	No	No	No	No	MEPL	No	No	No		No	Yes	C6
INCORRECT MEPL EVAL FOR CAT 1 SEISMIC STRUCTURE	FSAR SHOWS A SEISMIC CAT 1 - ME													
ACR 08408	3900I	2	No	No	No	No		No	No	No		No	Yes	C11
SOME PMMS ERRORS IN NUCLEAR INDICATOR	COULD RESULT IN AWO ERRORS													
VG-109	3900K	2	Yes	No	No	No	BASIS	es	No	No	OPERA	No	Yes	
SWP CUBICLE WATER TIGHT DOORS	QUESTION ON BASIS FOR 1 OR 2 DO													
VG-154	3900K	2	No	Yes	No	No		es	No	No	NO PM	No	Yes	C1
DCR SAYS PMs TO BE ESTABLISHED FOR INTAKE SUMP PU	MISSED HANDOFF FROM PDCR TO													
VG-55	3900K	2	Yes	No	No	No	FSAR	es	No	No	LINEUP	No	No	
SWP CUBICLE VENTILATION SYSTEM	DO WE OPERATE SYSTEM PER FSA													
VG-74	3900K	2	No	Yes	No	No	TEST	No	No	Yes	PDCR	No	Yes	C1
INTAKE STRUCTURE SUMP PUMPS	QUESTION AS TO IF PUMP TESTED P													
PIR 3-87-029	3900M	2	Yes	No	No	No		No	Yes	No		No	No	
MSV BUILDING HIGH EQ TEMPERATURE	30 DAY LER													
ACR 07373	3900N	4	Yes	No	No	No		No	No	No		No	No	
TIRE SEAL MISSING	ORIG CONSTRUCTION MISS													
ACR 02001	3960H	2	No	No	Yes	No		No	No	No		No	Yes	C1
CONTROL RM BOUNDARY BREECH DURING SIMPLEX UPGRA	CABLE SPREADING ROOM FIRE BAR													

<u>Source</u>	<u>Sys No</u>	<u>Group</u>	<u>Org Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR 7007</u>
<u>Deficiency</u>	<u>Notes</u>													
ACR 09354	N/A		Yes	No	No	No			No	No	No	No	Yes	C2
DRAWING DISCREPANCIES FOUND	ISOLATED ERRORS IN PDCR AND DC													
ACR 09763	N/A		No	No	No	No			No	No	No	No	Yes	C9
HISTORICAL CONCERN FOR FSAR DEFICIENCIES SIMILAR TO	CONDITION OF CONCERN ONLY													
ACR 10517	N/A		No	No	No	No			No	No	No	MAINT.	No	No
HOIST AND 'I' BEAM LEFT OVER BORIC ACID TANK	NO FUNCTIONAL IMPACT TEMPORARY													
ACR 12321	N/A		Yes	No	No	No			No	No	No	No	No	No
MINOR DRAWING TYPO ERRORS	NO CONSEQUENCE													
ACR 12516	N/A		No	Yes	No	No			No	No	No	No	Yes	
RM UV LCO NON-CONSERVATIVE	MISMATCH BETWEEN TRM AND TS													
VG-114	NA	NA	No	Yes	No	No			No	No	No	No	Yes	C9
HOW DOES ACR PROCESS ENSURE FSAR UPDATE	PROCESS QUESTION RELATING TO													
VG-114-28-7	NA	NA	No	Yes	No	No			No	No	No	No	Yes	C6
MEPL STATUS RELATIVE TO DOWNGRADES	CURIOSITY QUESTION RELATIVE TO													
VG-116	NA	NA	No	Yes	No	Yes	OIM U	es	No	No	OIM UP	No	Yes	
VENDOR MANUALS NOT ADEQUATELY TRACKED	PROCESS ISSUE FOR BOB COX PIEC													
VG-132	NA	NA	No	Yes	No	No	REVIE	es	No	No	DESIG	No	Yes	C1
DCP DOESN'T REQUIRE SAR AND NRC COMMITMENT REVIEW	RELATES TO DCM AND EXTENT OF													
VG-134	NA	NA	No	Yes	No	No	CHEC	es	No	No	DESIG	No	Yes	C1
NEW DCM ELIMINATES NEED TO CHECK-OFF NEED OR LACK	RELATES TO DCM CHECKLISTS													

<u>Source</u>	<u>Sys</u> <u>No</u>	<u>Group</u>	<u>Org</u> <u>Design</u>	<u>Mod</u>	<u>Field</u>	<u>Vend</u>	<u>Other</u>	<u>DP</u>	<u>TS</u>	<u>Test</u>	<u>Other</u> <u>Ops</u>	<u>BL</u>	<u>PP</u>	<u>ACR</u> <u>7007</u>
<u>Deficiency</u>	<u>Notes</u>													
VG-147	NA	NA	No	No	Yes	No					es No No	MAINT	No	Yes
SCAFFOLDING NEAR VITAL EQUIPMENT	SCAFFOLDING CONTROLS ISSUE													
VG-148	NA	NA	Yes	No	Yes	No	CONT	No	No	No		No	No	
I BEAM OVER EQUIPMENT	STARTUP AND CONSTRUCTION FEA													
VG-160	NA	NA	Yes	No	No	No		No	No	No		No	Yes	C11
SHOULD OPERABILITY DETERMINATIONS HAVE 50.59 EVALUA	NRC/NU STRUGGLING WITH THIS QU													
VG-41	NA	NA	Yes	No	Yes	No	FIELD	No	No	No	QUALIF	No	Yes	
ROSEMOUNT TRANSMITTER SHIPPING PLUGS	RELATES TO QUALIFICATION OF TR													
VG-84	NA	NA	No	No	No	No	DBDPs	No	No	No		Yes	No	
BDP DISCREPANCIES AND BASIS FOR CLOSURE	BASIS FOR CLOSURE QUESTIONED													

DCN

Case Doc	Deficiency
ACR 02228	VIOLATED DCN REQUIREMENT RE: CABLE SUPPORT
ACR 02635	PLANT CHANGE INITIATED VIA DCN VS PDCR
ACR 02854	DCN'S NOT PROCESSED PROPERLY
ACR 02856	DCNS SIGNED OFF W/O MOV ENGINEER REVIEW
ACR 02858	DCN ON DWST DID NOT LIST DOING AS OPS CRIT
ACR 07493	DCN NOT OPERATED PROPERLY FOR VENT LINE

} DCN problems all after
ACR process in place (1995)

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAD, and other documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

NCR

Source Doc	Deficiency
ACR 01173	RCP TO GASKETS
ACR 06941	NCR FOR NON-CONF STUDS FAILED TO ADDRESS MODE 4 & 5 OPERABILITY
ACR 08411	NCR DISPOSITIONED WITHOUT GENERATION OF BJ TO ENSURE FUTURE CONNECTOR
ACR 12862	MOV THRUST CALC REVIEW INCREASED RSS TEMP
AR 95047693	INCREASE IN UHS TEMPERATURE
NRB4	PIRS CLOSED OUT BEFORE NCRS ARE CLOSED ON SAME ISSUE
QS-94-086	NCR NOT PROCESSED CORRECTLY

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

CABLE

Source Doc	Deficiency
ACR 02001	CONTROL RM BOUNDARY BREACH DURING SIMPLEX UPGRADE
ACR 02228	VIOLATED DCN REQUIREMENT RE: CABLE SUPPORT
ACR 08452	INCORRECT CABLE NUMBER SPECIFIED IN BJ
ACR 08612	CWP BEARING TEMPARUTURE ELEMENT CABLES LANDED INCORRECTLY
ACR 10525	CABLE TRAY FILL NOT IN ACCORDANCE WITH FSAR DESCRIPTION
ACR 10787	CABLES NOT IN
ACR 12502	CABLE DOESN'T MEET FLAME RETARDANCY REQUIREMENT OF FSAR
PIR 3-86-167	INSTRUMENT CABLE INSULATION FAILURE
PIR 3-86-195	BREACH OF SLCRS BOUNDARY
PIR 3-88-057	CABLE SEPARATION CRITERIA VIOLATION
PIR 3-88-104	POTENTIAL LEAKS IN CABLE ASSEMBLIES
PIR 3-89-069	SFP BRIDGE CRANE CABLE BREAK
VG-100	CONTROLOTRON CABLE FIRE RATING
VG-142	CABLE TRAYS LOADED BEYOND FSAR LIMITS

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NCR

Source Doc	Deficiency
ACR 01173	RCP TO GASKETS
ACR 06941	NCR FOR NON-CONF STUDS FAILED TO ADDRESS MODE 4 & 5 OPERABILITY
ACR 08411	NCR DISPOSITIONED WITHOUT GENERATION OF BJ TO ENSURE FUTURE CONNECTOR
ACR 12862	MOV THRUST CALC REVIEW INCREASED RSS TEMP
AR 95047693	INCREASE IN UHS TEMPERATURE
NRB4	PIRS CLOSED OUT BEFORE NCRS ARE CLOSED ON SAME ISSUE
QS-94-086	NCR NOT PROCESSED CORRECTLY

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

AWO

Source Doc	Deficiency
ACR 00110	"A" CDG INTERCOOLER TEMP INDIC REVERSED
ACR 00635	DESIGN CHANGE CANCELED - AWO LEFT OPEN
ACR 00722	QA WORK DONE ON AWO SHORT FORM
ACR 01201	USED WRONG AWO FOR VE-2 INSPECTION
ACR 01540	DIFFICULTY IDENTIFYING AWO PKG REQUIREMENTS
ACR 02706	GAS EOS IV POOR CLOSED BEFORE AWO CLOSED
ACR 02868	FLANGE "A" SW TRAIN INSTALLED W/O BJ
ACR 02990	SW PUMP VALVE WOULD NOT STROKE OPEN
ACR 08408	SOME PMMS ERRORS IN NUCLEAR INDICATOR
PIR 3-86-239	INSUFFICIENT TAGGING - EQUIPMENT CYCLED
PIR 3-88-211	AWO WORKED WITHOUT AUTHORIZATION
PIR 3-92-025	AWO CANCELLED, TAGS CLEARED: JOB STILL WORKING
PIR 3-92-026	AWO ACCEPTED WITHOUT RETEST AND TAG CLEARANCE
PIR 3-92-036	AWOS WORKED WITHOUT OPS AUTHORIZATION
PIR 3-92-343	AWO RELEASED WITHOUT AUTHORIZATION
PIR 3-93-243	AWO WORKER WITHOUT AUTHORIZATION
PIR 3-94-193	RCP #3 SEAL LEAKOFF INSTALLED IMPROPERLY B OK
QS-93-022	CHANGE IN AWO WITHOUT PROPER REVIEWS
QS-93-023	WRONG AWO TYPE USED TO IMPLEMENT PDCR
QS-93-028	WRONG AWO TYPE USED TO IMPLEMENT PDCR
QS-93-034	WRONG AWO TYPE USED TO IMPLEMENT PDCR
QS-93-103	AWOS NOT REVIEWED PROPERLY
QS-93-130	AWO PKG CONTAINED WRONG PROCEDURE
SIP-MP3-P-95-03	AWO DEFICIENCIES (VARIOUS)
SIP-MP3-P-95-03	AWO DEFICIENCIES (VARIOUS)

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MOV

Source Doc	Deficiency
ACR 02856	DCNS SIGNED OFF W/O MOV ENGINEER REVIEW
ACR 02858	DCN ON DWST DID NOT LIST DOING AS OPS CRIT
ACR 03013	MOV MOTOR TERMINAL BLOCKS NOT EQ QUALIFIED
ACR 05276	CAUTION TAGS NOT REMNED FROM HEATERS
ACR 08317	MOV OPERATOR INSTALLED BACKWORDS
ACR 10325	WIRE IN MOV CIRCUIT NOT LANDED
ACR 12862	MOV THRUST CALC REVIEW INCREASED RSS TEMP
N95-11	MOV CONTROL MOD NOT VERIFIED
NSABE11	USE OF PDCR VS DCN
NSABE13	GENERIC VS SPECIFIC PDCR USAGE
PIR 3-86-229	CIRC PUMP TRIP LOW LUBE WATER
PIR 3-88-097	BLANK FLANGE REMOVED WITHOUT BJ AUTHORIZATION
PIR 3-88-159	BJ REMOVED WITHOUT AUTHORIZATION
PIR 3-88-213	BJ REMOVAL WITHOUT AUTHORIZATION
PIR 3-88-89	2 BJ'S REMOVED WITHOUT AUTHORIZATION
PIR 3-91-114	MISSED LLRT AFTER MOV TORQUE SWITCH REPLACEMENT
PIR 3-92-191	RED TAGGED VLV REMOVED FROM SERVICE
PIR 3-93-244	BJ REMOVED WITHOUT AUTHORIZATION
PIR 3-94-243	MOV TEST ACCEPTANCE CRITERIA ERROR
PIR 3-94-244	MOV BOLTING DISCREPANCIES
PIR-3-88-048	VALVE STEM ADAPTOR CAN DISENGAGE SELF
VG-106	APPENDIX R ISSUE WITH SWP*MOV130 VALVES
VG-158	WAS DIAPHRAGM COMPLETELY REMOVED FROM DWST

*redo**"A MOV* sp*"*

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

TESTING

Source Doc	Deficiency
ACR 04886	SP TESTING INCONSISTENT W/IST PROG.
ACR 08561	FSAR IN ERROR ON RESPONSE TIME TESTING TIME SPEC. FUNCTIONS
ACR 08562	FSAR ERROR IN RESPONSE TIME TESTING - CONFLICT WITH TECH SPEC
ACR 13220	FIRE DAMP ER TESTING NOT DONE
NA 12139	NOV BATTERY TESTING DEFFECIENCY
PIR 3-88-209	INADEQUATE TESTING - PROC. DEFICIENCY
PIR 3-94-024	FW ISOL MAY HAVE DEGRADED WITHOUT BEING DETECTED
PIR 3-94-128	NOT TESTING PER FSAR
QS-93-119	VOTES TESTING SURVEILLANCE

FSAR

Source Doc	Deficiency
ACR 00294	AFW CK VLV NOT IN IST PROGRAM
ACR 00455	INCORRECT MEPL EVAL FOR CAT 1 SEISMIC STRUCTURE
ACR 01148	FSAR DOESN'T REFLECT NEW SITE BLDGS
ACR 02167	FSAR CHANGE APPD W/O SAFETY EVALUATION
ACR 02304	BJ VIOLATED REG GUIDE 1.143
ACR 03628	FSAR OB ISSUE; EDG STARTING AIR PRESSURE
ACR 04559	FSAR COMMITMENT NOT MET
ACR 04877	DISCREPANCIES BETWEEN DRAWINGS & FSAR
ACR 06637	FSAR DOES NOT CORRECTLY DESCRIBE REEL MONITOR FUNCTION
ACR 07214	MINOR FSAR ERRORS NOT AFFECTING FUNCTION
ACR 07363	FSAR DOES NOT REFLECT MODIFICATION CHANGES
ACR 08561	FSAR IN ERROR ON RESPONSE TIME TESTING TIME SPEC. FUNCTIONS
ACR 08562	FSAR ERROR IN RESPONSE TIME TESTING - CONFLICT WITH TECH SPEC
ACR 08830	BACKLOG RESULTS IN FSAR AND OTHER PROGRAMS NOT BEING TIMELY UPDATED
ACR 08838	FSAR NOT PROPERLY TRANSLATED INOT CHEMISTRY CABLE
ACR 08843	FSAR & TECH SPEC FLOW RATE NOT IN AGREEMENT
ACR 08903	FSAR DOES NOT AGREE WITH NETM
ACR 08907	DISCREPANCY BETWEEN FSAR AND CALCULATION
ACR 09321	FSAR AND P&ID OUT OF DATE PER LATEST TSCR
ACR 09763	HISTORICAL CONCERN FOR FSAR DEFICIENCIES SIMILAR TO MP1
ACR 10384	FSAR SYSTEM FUNCTIONAL DESCRIPTION DISCREPENCY
ACR 10519	FSAR PROTECTION SETTINGS NOT SAME AS FIELDL SETTINGS
ACR 10525	CABLE TRAY FILL NOT IN ACCORDANCE WITH FSAR DESCRIPTION
ACR 10539	FSAR NOT UPDATED PER PDCR
ACR 10778	FSAR DESCRIPTION HAS NO TOLERENCE ON JACKET WATER TEMPERATURE
IPE-95-011	DIESEL STARTING AIR STUCK OPEN RUST
NSAB22	DIFFERENT EDG START TIMES: FSAR VS TS
PIR 3-94-016	EDG STARTING AIR DEGREDATION
PIR 3-94-060	AFW PIPING NOT SUPPORTED FOR HIGH ENERGY
VG-111	CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEMENT
VG-112	K AND L SAFETY TRAY FILL CRITERIA
VG-114	HOW DOES ACR PROCESS ENSURE FSAR UPDATE
VG-142	CABLE TRAYS LOADED BEYOND FSAR LIMITS
VG-55	SWP CUBICLE VENTILATION SYSTEM

show recent "Religion" re FSAR (+994 is added)

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

IAW

Source Doc	Deficiency
NA 12139	NOV BATTERY TESTING DEFECIENCY
NSAB11	DESIGN ASSUMPTIONS NOT IAW DESIGN BASIS
PIR 3-86-151	RAD MONITOR SETPOINT DATA BASE CHANGE ERROR
PIR 3-92-057	AVX CONDENSATE NOT SAMPLED IAW BJ

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV's, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

MEPL

Source Doc	Deficiency
ACR 00455	INCORRECT MEPL EVAL FOR CAT 1 SEISMIC STRUCTURE
ACR 01149	CTMT EQT HATCH COMPONENTS NOT SHOWN AS CAT I
ACR 06948	MEPL DOWNGRADE INAPPROPRIATE DUE TO SEPARATIONS REQUIREMENT
N95-09	MEPL DOWNGRADE PROCESS
PIR 3-88-228	NON QA PARTS IN QA SYSTEM
PIR 3-95-028	INSTALLED NON QA SEAL QA LISTED APPLICATION
VG-114-28-72	MEPL STATUS RELATIVE TO DOWNGRADES

} mostly very recent

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

SCAFFOLD

Source Doc	Deficiency
ACR 08442	SCAFFOLDING INSTALLATION DOESNT MEET SPECIFICATIONS
ACR 10585	SCAFFOLDING HAS POTENTIAL PROBLEM
N95-07	SCAFFOLD INSTALLED IMPROPERLY
PIR 3-93-244	BJ REMOVED WITHOUT AUTHORIZATION
VG-147	SCAFFOLDING NEAR VITAL EQUIPMENT

*Seems like there
should be more*

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

AFW

Source Doc	Deficiency
ACR 00294	AFW CK VLV NOT IN IST PROGRAM
ACR 03264	CK VLV BACKLEAKAGE OVERHEATS AFW LINE
ACR 03265	LEAKING AFW CK VLVS
ACR 10774	AFW FCV ISOLATION CAPABILITY DEFICIENCY
ACR 10780	TTAFW VALVE SHEET TO TEST MDAFWP
ACR 10790	TT & MDAFW PUMP PRE-LUBE NOT PERFORMED OER VENDOR REQUIREMENY
E94-004	AUX FEED PIPE SUPPORTS:HELB ISSUE
PIR 3-86-136	AUX FEED FLOW CAL FAILURE
PIR 3-88-105	VENDOR NOTICE ON SCC ON AFW PUMPS
PIR 3-94-060	AFW PIPING NOT SUPPORTED FOR HIGH ENERGY
PIR 3-94-206	AFW TT COULD NOT BE TESTED/INCONSISTENTS
VG-127	MDAFWP PRE-LUBE

*What about 9/94 if failures
to start?*

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

SBO

Source Doc	Deficiency
ACR 01862	DRAWING ERROR OPS CRIT SBO D/G DWNG
AR 9500914	SBO D/G VECTRA ISSUE CLOSE-OUT
SIP-MP3-P-95-000	SBO DG - MEAL UPDATE NOT TIMELY

P

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV's, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

LANDED

Source Doc	Deficiency
ACR 02990	SW PUMP VALVE WOULD NOT STROKE OPEN
ACR 06286	WIRES NOT LANDED ON NON RETURN VALVE
ACR 08612	CWP BEARING TEMPARUTURE ELEMENT CABLES LANDED INCORRECTLY
ACR 09466	WIRE LANDED ON INCORRECT TERMINAL
ACR 10325	WIRE IN MOV CIRCUIT NOT LANDED
ACR 10532	WIRE LANDED ON INCORRECT TERMINAL
ACR 10545	SPARE WIRE NOT LANDED PER DRAWING

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

BTP 9.5.1

Source Doc	Deficiency
ACR 07746	APPENDIX R (BTP 9.5.1) NOT UPDATED TO REFLECT PDCR
ACR 08820	BTP 9.5.1 LIGHTS NOT AIMED PROPERLY
QA-95-4043	BJs NOT EVALUATED AGAINST BTP 9.5.1 COMPATIBILITY

Search also for "Appendix R"

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

CCP

Source Doc	Deficiency
ACR 00831	AO FLOW IN "C" CCP HX SW LINE
ACR 01849	3CCPXPIA OUTBOARD AIR DEFLECTOR LOOSE ✓
ACR 03293	AIR DEFLECTOR LOOSE:CCP MOTOR ✓
ACR 07187	CCP MOTOR AIR DEFLECTOR DAMAGE ✓
ACR 08425	CCP PIPING TEMPERATURES LIMIT EXCEEDED
NRB9	SYSTEM NOT OPERATED AS INTENDED
PIR 3-88-152	TUBE LEAK ON CCP: INCORRECT RELIEF VALVE
PIR 3-92-168	MUSSELS FOUND IN CCP HX ✓
PIR 3-93-057	MUSSELS FOUND IN CCP HX ✓
PIR 3-93-060	CCP VALVE EXCEEDED STROKE TIME LIMITS
PIR 3-94-287	RUBBER PLUGS LEFT IN CCP HX FROM
VG-111	CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEMENT
VG-92	CCP SYSTEM WALKDOWN ITEMS
VG-94	CCP SYSTEM TEMPERATURE ISSUES ✓

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV's, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

K.

SURVEILLANCE

Source Doc	Deficiency
ACR 04195	TRM ISSUE ON AUX BLDG HEATER AVAILABLE
ACR 05742	MSIV TEST SOLENOID 4A FAILED ON SURVEILLANCE TEST
ACR 06945	SURVEILLANCE PROCEDURE NOT CONSERVATIVE
ACR 10548	ORIGINAL CALCULATION ERROR IN CALC USED FOR SURVEILLANCE FLOW TEXT
ACR 10790	TT & MDAFW PUMP PRE-LUBE NOT PERFORMED OER VENDOR REQUIREMENY
ACR 10803	PROCEDURE CHANGE RESULTS IN TECHNICAL SPECIFICATION SURVEILLANCE NOT BEING PERFO
ACR 11321	FAILURE TO DERIVE PROPER SURVEILLANCE LIMITS BASED ON CALCULATIONS
NA 12529	SURVEILLANCE ALLOWED TO LAPSE
NSAB16	SURVEILLANCE CLOCK TRIGGERS ARE INADEQUATE
PIR 3-91-101	TECH SPEC FLOW SURVEILLANCE TEST
PIR 3-94-234	IST SURVEILLANCE NOT CONSERVATIVE WITH SUPPORT TO CORPORATE ENG
VG-118	BATTERY 6 SURVEILLANCE METHOD QUESTIONED
VG-127	MDAFWP PRE-LUBE

Search "Sun" also

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

LABELING

Source Doc	Deficiency
ACR 00871	BREAKER MIS-LABELING ISSUE
ACR 07743	PDCR FAILED TO SPECIFY MCC LABELING UPDATES

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

DRAWING(S)

Source Doc	Deficiency
ACR 00223	BJ ATTACHED TO OPS CRIT DRAWINGS & NOT INSTALLED
ACR 00871	BREAKER MIS-LABELING ISSUE
ACR 00891	OPS CRIT DRAWINGS NOT REDLINED
ACR 01862	DRAWING ERROR OPS CRIT SBO D/G DWNG
ACR 04507	ELECTRICAL SCHEMATIC DRAWINGS INEFFECTIVELY CONTROLLED
ACR 04561	CONTROLLED DRAWING DOCUMENTATION INADEQUATE
ACR 04877	DISCREPANCIES BETWEEN DRAWINGS & FSAR
ACR 04887	OPS CRIT DRAWING DOESNT REFLECT AS BUILT STATUS
ACR 05196	FIRE RATED ASSEMBLIES
ACR 06604	DRAWING DISCREPANCY RES. AS-BUILT CONDITION FOR RC STAMP ELEMENTS
ACR 06942	CONTAINMENT SUMP PUMP P&ID DRAWING CONFUSED
ACR 07203	BREAKER LABELS AT ODDS WITH ONE-LINE DAGRAMS
ACR 08568	AS BUILT ERROR FOUND IN EDG SUPPRESION DRAWING
ACR 08790	DRAWING AS BUILT ERROR
ACR 08803	DRAWING DISCREPANCY
ACR 09334	DRAWING ERROR PER FIELD CONDITION
ACR 09354	DRAWING DISCREPANCIES FOUND
ACR 09355	MINOR DRAWING ERROR
ACR 09357	MINOR DRAWING ERROR
ACR 09362	MINOR DRAWING ERROR
ACR 09377	MINOR DRAWING DISCREPANCIES
ACR 10356	MINOR P&ID DRAWING PHYSICAL LOCATION DESCRIPTION DISCREPANCY
ACR 10532	WIRE LANDED ON INCORRECT TERMINAL
ACR 10862	DRAWING DISCREPANCIES
ACR 10864	DRAWING DISCREPANCY
ACR 12321	MINOR DRAWING TYPO ERRORS
ACR 12347	DISCREPANCY BETWEEN OPS CRIT DRAWING AND FIELD CONDITION
ACR 63630	DESIGN DRAWING DISCREPENCY
PIR 3-92-330	ONE LINE DRAWING HAS WRONG INFO
PIR 3-95-005	DRAWING ERROR/LACK OF VERIFICATION
SIP-MP3-P-96-01	OPS NOT USING GRITS FOR DRAWING REVS
VG-146	DRAWING DISCREPANCY ON SERVICE WATER BACKWASH FEATURE

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

PDCR

Source Doc	Deficiency
ACR 00633	PROJECT CLOSE-OUT DEFICIENCIES
ACR 03269	INCOMPLETE INCORP OF CHANGES ON OPS FORM
ACR 07344	PDCR RELEASED TO OPS NOT FULLY IMPLEMENTED
ACR 07743	PDCR FAILED TO SPECIFY MCC LABELING UPDATES
ACR 07746	APPENDIX R (BTP 9.5.1) NOT UPDATED TO REFLECT PDCR
ACR 09354	DRAWING DISCREPANCIES FOUND
ACR 11321	FAILURE TO DERIVE PROPER SURVEILLANCE LIMITS BASED ON CALCULATIONS
NSAB10	PDCR SAFETY EVAL DOESN'T ADDRESS USQ
NSABE11	USE OF PDCR VS DCN
NSABE13	GENERIC VS SPECIFIC PDCR USAGE
PIR 3-86-160	INTERMITTENT GROUND
PIR 3-86-229	CIRC PUMP TRIP LOW LUBE WATER
PIR 3-92-192	EQ CONDUIT SEAL INSTALLATION INVALID
PIR 3-95-007	HOOK VENTS INSTALLED ON UNSPECIFIED LINES
SIP-MP3-P-95-004	PDCR GENERATION FROM BJ'S NOT TIMELY
VG-106	APPENDIX R ISSUE WITH SWP*MOV130 VALVES
VG-111	CCP PROTECTION SETPOINTS DIFFER FROM FSAR STATEMENT
VG-154	PDCR SAYS PMs TO BE ESTABLISHED FOR INTAKE SUMP PUMP
VG-74	INTAKE STRUCTURE SUMP PUMPS

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

BJ

Source Doc	Deficiency
ACR 00223	BJ ATTACHED TO OPS CRIT DRAWINGS & NOT INSTALLED
ACR 01174	BJ INSTALLED WITHOUT AWO
ACR 01179	GENERATOR PHASE IMBALANCE RELAY REMOVAL
ACR 01866	WORK RELEASED CONFLICTED WITH BJ IN USE
ACR 02304	BJ VIOLATED REG GUIDE 1.143
ACR 08317	MOV OPERATOR INSTALLED BACKWARDS
ACR 08411	NCR DISPOSITIONED WITHOUT GENERATION OF BJ TO ENSURE FUTURE CONNECTOR
ACR 09477	BJ CLOSE-OUT DID NOT CHANGE OP
ACR 10163	INCORRECT VERSION OF BJ ATTACHED TO OPERATIONS CONTROL DRAWINGS
ACR 10782	BJ REQUIRES OPERATOR ACTION YET NO PROCEDURES IN PLACE FOR THIS
ACR 10795	BJ DEFEATED AUTC START FEATURES
IES.1	SOME SYSTEM ENGINEER NOT AWARE OF STATUS OF BJS AND PDCRS
IES.3-1	BJ'S INCOMPLETE MODS AND A FEW CONTROLLED EQUIP INSTALLATION
PIR 3-86-147	MAIN GENERATOR OVER VOLTAGE
PIR 3-88-013	BJ INSTALLED WITHOUT AUTHORIZATION
PIR 3-88-087	TEMPORARY PUMP INSTALLED WITHOUT PAPER
PIR 3-88-097	BLANK FLANGE REMOVED WITHOUT BJ AUTHORIZATION
PIR 3-88-159	BJ REMOVED WITHOUT AUTHORIZATION
PIR 3-88-213	BJ REMOVAL WITHOUT AUTHORIZATION
PIR 3-88-89	2 BJ'S REMOVED WITHOUT AUTHORIZATION
PIR 3-92-181	BJ NOT APPROVED IN 14 DAYS
PIR 3-93-217	FOREIGN OBJECT IN CORE SUPPORT PLATE
PIR 3-93-244	BJ REMOVED WITHOUT AUTHORIZATION
PIR 3-94-070	BJ REVIEW NOT CONDUCTED
QA-95-4043	BJS NOT EVALUATED AGAINST BTP 9.5.1 COMPATIBILITY
SIP-MP3-P-95-004	PDCR GENERATION FROM BJ'S NOT TIMELY
SIP-MP3-P-96-028	BJ RESTORATION NOT PER PROCEDURE
SIP-MP3-P-96-028	BJ RESTORATION NOT PER PROCEDURE

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV's, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

MSIV

Source Doc	Deficiency
ACR 01821	"A" MSIV FAILURE TO OPEN
ACR 05742	MSIV TEST SOLENOID 4A FAILED ON SURVEILLANCE TEST
ACR 06322	MSIV ZERO CLOSED POSITION INDICATION QUESTIONED
AR 9500515	MSIV STROKE TIME PROBLEMS
PIR 3-87-072	MSIV STROKE TIME EXCEEDS TS LIMITS
PIR 3-94-010	MSIV PARTIAL STROKE TIME
PIR 3-94-115	"C:" MSIV PART STROKE FAILURE
PIR 3-94-157	"C" MSIV PART STROKE FAILURE
PIR 3-94-185	'C' MSIV FAILED CLOSED
PIR 3-94-207	MSIV TS INADEQUATE TO SUPPORT MODE CHANGE
PIR 3-94-282	'C' MSIV PART STROKE FAILURE
PIR 3-94-284	MSIV PART STROKE FAILURE

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

MUSSEL (S)

Source Doc	Deficiency
E94-004	MUSSEL FOULING; HYPOCHLORITE SYSTEM DESIGN
PIR 3-91-161	HX FOULED WITH MUSSELS INOP
PIR 3-91-162	HX FOULED WITH MUSSELS INOP
PIR 3-91-170	"B" HX INOP: MUSSEL FOULING
PIR 3-91-171	SERVICE WATER SYSTEM MUSSEL FOULING
PIR 3-91-172	"C" HX INOP: MUSSEL FOULING
PIR 3-91-184	EDG INOP - MUSSEL FOULING
PIR 3-92-168	MUSSELS FOUND IN CCP HX
PIR 3-93-057	MUSSELS FOUND IN CCP HX

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

RCP

Source Doc	Deficiency
ACR 01173	RCP TO GASKETS
ACR 06336	D RCP SEAL HOUSING LEAKING
ACR 07266	RCP SEAL BOLT DEGRADATION
I93	RCP STANDPIPE LEVEL CONTROLLED BY CTMT ISOL
N9507	SLCRS INOP ROOF PLUG REMOVED
PIR 3-88-007	RCP OIL COLLECTION SYSTEM DOCUMENTATION INADEQUATE
PIR 3-88-094	RCP TURNING VANE BOLTS CRACKED
PIR 3-93-240	MISSED RECEIPT INSPECTION RCP MOTOR
PIR 3-93-242	RCP INTENALS PAPERWORK MISSING
PIR 3-94-137	RCP TVCS-SEABROOK INFO
PIR 3-94-193	RCP #3 SEAL LEAKOFF INSTALLED IMPROPERLY
PIR 3-94-200	FUSE INCORRECT IN RCP MOTOR CKT
UNKNOWN1	FAILED TO GET ANTI SIGNATURE ON AWD FOR RCP SEAL HOUSING BOLT REPLACEMENT
UNKNOWN1	FAILED TO GET SIGNATURE ON AWD FOR RCP SEAL HOUSING BOLT REPLACEMENT

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

EQ

Source Doc	Deficiency
ACR 01162	EQ LEVEL SWITCHES NOT REPLACED ON TIME
ACR 03013	MOV MOTOR TERMINAL BLOCKS NOT EQ QUALIFIED
ACR 07337	LOSS OF CENTRAL OF EQ MASTER LIST
ACR 08903	FSAR DOES NOT AGREE WITH NETM
ACR 12339	EQ 10 YEAR EQUIPMENT INSPECTION MISSED
PIR 3-87-029	MSV BUILDING HIGH EQ TEMPERATURE
PIR 3-87-054	LOCAL TE-77 CTMT EQ TEMP >TS LIMIT
PIR 3-88-054	NON-COMPLIANCE WITH EQ REQUIREMENTS
PIR 3-88-057	CABLE SEPARATION CRITERIA VIOLATION
PIR 3-88-060	VARIOUS SWITCHES NOT EQ QUALIFIED
PIR 3-88-061	INCOMPLETE EQ QUAL PACKAGES
PIR 3-88-091	CONTAINMENT EQ TEMP HIGH FOLLOWING UNIT STARTUP
PIR 3-88-129	CONTAINMENT TEMP ABOVE EQ LIMIT
PIR 3-88-153	CONTAINMENT EQ TEMP PROFILE WAS TOO CONSERVATIVE
PIR 3-90-088	EQ TEMPS NOT RECORDED ON ROUNDS
PIR 3-92-171	WRONG MATERIAL FOR PORV GASKETS
PIR 3-92-192	EQ CONDUIT SEAL INSTALLATION INVALID
PIR 3-94-005	RCS RTD TEMP HIGHER THAN ASSUMED IN EQ LIFE

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

EDG

Source Doc	Deficiency
ACR 03628	FSAR OB ISSUE; EDG STARTING AIR PRESSURE
ACR 05193	EDG ALARM SETPOINT NOT CHANGED ON TIME
ACR 08568	AS BUILT ERROR FOUND IN EDG SUPPRESSION DRAWING
I93	PLANT ENGINEERS DID NOT PURSUE EQUIP PROBLEMS, QUESTIONING ATTITUDE
NSAB22	DIFFERENT EDG START TIMES: FSAR VS TS
PIR 3-87-016	EDG START TIME > 10 SECONDS
PIR 3-87-035	EDG START TIME > 10 SECONDS
PIR 3-88-207	EDG SEQUENCER RELAY TESTING
PIR 3-91-167	"A" EDG INOP: LOW RECEIVER PRESSURE
PIR 3-91-184	EDG INOP - MUSSEL FOULING
PIR 3-92-179	"A" EDG EXPANSION JOINT FAILURE
PIR 3-92-333	EDG RECEIVER NOT CROSS-TIED
PIR 3-94-016	EDG STARTING AIR DEGRADATION
PIR 3-94-108	EDG KEEP RUNNING WHEN STOP SIGNAL GIVEN
PIR 3-94-124	C EDG FO XFER PP DID NOT START LEVEL SWITCH PROBLEM
VG-151	EDG SETPOINTS

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

SLCRS

Source Doc	Deficiency
ACR 04880	SLCRS BOUNDARY BREACH - MISSING FIRE SEAL
ACR 04883	SLCRS BOUNDARY BREACH - MISSING FIRE SEAL
I92	ENGINEERING TIMELINESS, NOTES SLCRS DEFICIENCY NOTED IN 1985
I93	SLCRS WORK AROUND ON FAN STARTS REDUCING AVAILABILITY OF FANS
IMA2	EQUIPMENT PROBLEMS REQUIRE OPERATES COMPENSATORY ACTION
N9507	SLCRS INOP ROOF PLUG REMOVED
PIR 3-86-155	SLCRS BACKDRAFT DAMPER FAILURE
PIR 3-86-195	BREACH OF SLCRS BOUNDARY
PIR 3-86-246	SLCRS FAILED SURVEILLANCE
PIR 3-91-108	SLCRS BOUNDARY BREACHED WITHOUT AWO
PIR 3-91-158	"A" SLCRS FILTER FAILS FLOW TEST
PIR 3-91-166	BOTH SLCRS FILTERS OOS: FIRE DAMPER REPAIR
PIR 3-92-052	SLCRS BOUNDARY BREACH

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

DEFLECTOR

Source Doc	Deficiency
ACR 03293	AIR DEFLECTOR LOOSE:CCP MOTOR
ACR 01849	3CCPXP1A OUTBOARD AIR DEFLECTOR LOOSE
ACR 07187	CCP MOTOR AIR DEFLECTOR DAMAGE

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOV's, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

EDG

Source Doc	Deficiency
ACR 03628	FSAR OB ISSUE; EDG STARTING AIR PRESSURE
ACR 05193	EDG ALARM SETPOINT NOT CHANGED ON TIME
ACR 08568	AS BUILT ERROR FOUND IN EDG SUPPRESSION DRAWING
I93	PLANT ENGINEERS DID NOT PURSUE EQUIP PROBLEMS, QUESTIONING ATTITUDE
NSAB22	DIFFERENT EDG START TIMES: FSAR VS TS
PIR 3-87-016	EDG START TIME > 10 SECONDS
PIR 3-87-035	EDG START TIME > 10 SECONDS
PIR 3-88-207	EDG SEQUENCER RELAY TESTING
PIR 3-91-167	"A" EDG INOP: LOW RECEIVER PRESSURE
PIR 3-91-184	EDG INOP - MUSSEL FOULING
PIR 3-92-179	"A" EDG EXPANSION JOINT FAILURE
PIR 3-92-333	EDG RECEIVER NOT CROSS-TIED
PIR 3-94-016	EDG STARTING AIR DEGRADATION
PIR 3-94-108	EDG KEEP RUNNING WHEN STOP SIGNAL GIVEN
PIR 3-94-124	C EDG FO XFER PP DID NOT START LEVEL SWITCH PROBLEM
VG-151	EDG SETPOINTS

Query based on search of 644 line entries. These entries consist of 100 percent of ACRs, PIRs, NOVs, NSAB, QAS etc. documents screened to be relevant to Design and License basis issues from May 15, 1996 back to January 1, 1994, and approximately one-third of the PIRs from Dec. 31, 1993, back to January 1, 1986.

ATTACHMENT D

UNIT SPECIFIC ASSESSMENTS QUALIFICATION RECORD

Employee (or contractor) Name: KEN BURTON SSN: _____ (OPTIONAL)

Project Lead: GEORGE PITMAN

TASK

- Conduct the Unit Specific Self-assessment in Accordance with the Unit Specific Attachment of the CMP

PREREQUISITES (Attach resume if not an NU Employee)

1. Education: B.S. in engineering or science; exceptions may be made based on extensive experience in Nuclear Operations/Engineering (note 1).
2. Experience (with B.S.): minimum 5 years in nuclear industry Nuclear Operations/Engineering.

TYPICAL PROJECT REQUIREMENTS (Individual qualifications based on task assignment)

REFERENCE MATERIAL TO BE REVIEWED	Degree of Review Required (Note 2)			Initial	Review Completed Date
	1	2	N/A		
Training Overview and Introduction ATTEND	X			GP	5/16/96
PI-2 Unit Specific Self assessments		X		GP	5/17/96
PI-14 Configuration Management Plan Project Administration Instruction		X		GP	5/17/96
Configuration Management Plan - Rev D + in change of this (Rev 1)		X		GP	5/17/96

Notes:

- (1) Education Pre-Requisite
The Project Lead shall provide the exception reasons when needed.
 - (2) Degree of Review
 1. Understand & Demonstrate (Project Lead or designee shall initial and date completion)
 2. Read to have general understanding (Individual shall initial & date completion)
- N/A Item is available for individual information as situation permits.

**UNIT SPECIFIC ASSESSMENTS
QUALIFICATION RECORD**

Employee (or contractor) Name: MARK WHITNEY SSN: _____
 Project Lead: GEORGE PITMAN (OPTIONAL)

TASK

- Conduct the Unit Specific Self-assessment in Accordance with the Unit Specific Attachment of the CMP

PREREQUISITES (Attach resume if not an NU Employee)

1. Education: B.S. in engineering or science; exceptions may be made based on extensive experience in Nuclear Operations/Engineering (note 1).
2. Experience (with B.S.): minimum 5 years in nuclear industry Nuclear Operations/Engineering.

TYPICAL PROJECT REQUIREMENTS (Individual qualifications based on task assignment)

REFERENCE MATERIAL TO BE REVIEWED	Degree of Review Required (Note 2)			Initial	Review Completed Date
	1	2	N/A		
Training Overview and Introduction ATTEND	X			MP	5/16/96
Unit Specific Self assessments		X		MP	5/17/96
4 Configuration Management Plan Project Administration		X		MP	5/16/96
Configuration Management Plan, Rev 0					
Change Orders (Rev 1)		X		MP	5/17/96

- Notes:
- 1. Education Pre-Requisite
The Project Lead shall provide the exception reasons when needed.
 - (2) Degree of Review
 1. Understand & Demonstrate (Project Lead or designee shall initial and date completion)
 2. Read to have general understanding (Individual shall initial & date completion)
 - N/A Item is available for individual information as situation permits.

ATTACHMENT E

PERSONNEL INTERVIEWED AS PART OF PI 2 PROCESS

C. J. Ashton -- Current MP3 Mechanical Engineering Design Engineering Supervisor
R. A. Andren -- Current MP3 Manager, Design Engineering
J. Harris -- Original Unit Engineering Manager
D. McDaniel -- Former MP3 Unit Engineering Manager and Current Rx. Engr. Supervisor
J. Ruttar -- Current MP3 Shift Manager
S. Lawhead -- Current MP3 Shift Manager
M. B. Brown -- Original MP3 I&C Supervisor and Current Millstone Oversight Director
D. Deane -- Current MP3 Electrical Design Supervisor
R. Standish -- Current MP3 Mechanical/Civil Design Supervisor
M. Dolishney -- Current MP3 I&C Supervisor
D. Asay -- Current MP3 I&C Engineer
J. O'Brien -- Current MP3 Generation Test Supervisor
B. Roy -- Current MP3 Maintenance Manager
S. Heard -- Former MP3 Procedure Writer
D. C. Gerber -- Former MP3 Mech/Civil Des. Sup. and Current Mgr., Tech. Support
T. J. Mawson -- Current MP3 NSSS Systems Supervisor
G. Swider -- Current MP3 Service Water System Engineer
R. DeConto -- Current MP3 Mechanical Design Engineer
J. Petrosky -- Current MP3 Mechanical Engineer
P. Privizzini -- Current MP3 Electrical Maintenance Supervisor
M. Hess -- Former MP3 Unit Engineering Supervisor and Current AFW System Engr.
L. Loomis -- Current MP3 ISI Engineer
R. Broullier -- Current MP3 HVAC/Support Systems System Engineer
A. Silvia -- Current NUSCo Welding Engineering

ATTACHMENT E

(Note that this form is marked up to depict average response score.)

MP3 UNIT-SPECIFIC ASSESSMENT OF CONFIGURATION
STATUS, PER PROJECT INSTRUCTION 2
TO THE CMP

PERSONNEL INTERVIEW QUESTIONNAIRE

Interviewee's Name _____ Date of Interview _____
Interviewer's Name(s) _____
Interviewee's Current Position _____
Interviewee's Past Position(s) having relevance to PI 2 issues _____

NOTE

The following questions are intended to tap the full knowledge gained over the full period of experience of the interviewee. Responses need to reflect past as well as current practice. If useful, provide two ratings with past practice first and current practice last.

I) On a scale of 1 to 5, (1 being "poor" or "low" and 5 being "excellent" or "high") how would the Interviewee rate himself and/or MP3 relative to the following?

A. Familiarity with/use of FSAR

- a) your understanding of why MP3 has a FSAR 3.73/4.36 (1986/1996 or year of assignment to MP3)
- b) your frequency of use of the FSAR 2.71/3.24
- c) your knowledge of when to consult the FSAR 2.81/3.90

B. FSAR Integrity

- a) in terms of accuracy 3.79/3.79
- b) in terms of clarity 3.68/3.89
- c) in terms of completeness 3.74/3.68

C. Translation of FSAR into Departmental Procedures & Surveillances

- a) quality of department procedures relative to FSAR-described assumptions 3.06/3.69
- b) quality of surveillances relative to FSAR-described assumptions 3.07/3.79

D. Maintenance of FSAR

- a) familiarity with process changes resulting in need to revise FSAR 3.06/3.67
- b) thoroughness, timeliness and consistency of interviewee's actions to correct FSAR upon discovery of errors 2.82/3.94

E. Impact of FSAR on Interviewee's Work Activity

- a) awareness of FSAR impact on his work activity 3.15/3.75
- b) awareness of his work activities impact on FSAR 3.16/3.89

F. Ability to establish the license basis for a particular system attribute

- a) Rate the ease with which establishing the license basis is accomplished 2.94/3.43
- b) Rate yourself relative to your consistency in exploring the license basis prior to modifying the design or operating characteristics of plant systems 3.57/4.0

II. Answer the following questions as succinctly as reasonably possible.

(Note that the answers to the following questions were essay type and of wide variation. The Team will retain a loose leaf binder of questionnaires wherein responses can be reviewed by the appropriate parties upon request.)

A. What documents do you believe form the license basis for MP3?

B. What does the term, Design Basis mean to you?

C. In the conduct of your work assignments, do you have the occasion to review portions of the unit's FSAR, and, if so, describe these?

D. How do know what sections of the FSAR to read?

E. What do you do when you find an FSAR problem?

F. Explain how you would establish the license basis prior to designing a modification to the unit or change the manner in which a system is operated and/or tested.

G. Changes in Work Habits With Respect To use of or respect for the FSAR

a) Has anything occurred to change how you deal with the FSAR _____

b) Describe that change and the reasons for it _____

H. Do you know of areas potentially susceptible to the types of problems which have led to the current shutdowns of all three Millstone Units?

HIGHLIGHTED AREAS MUST BE RESEARCHED (H/L)

OTHER ISSUES FROM 50.54 F INTERVIEWS: 5/8/96-5/15/96

- In the 1986-1990 time frame, both on and of site engineering groups performed calcs. There was no common
- index. Efforts by one group may have invalidated another's work, and neither may have been compared to FSAR assumptions. We need a method to verify old calc. input per FSAR assumptions, and to ensure there is only ONE index available for calcs. } Subject of TEAM RECC
- Assess the impact of other calcs. on radiological calcs.
- Initial tech spec reviews were fast paced. The link between TS changes and the FSAR may be tenuous. TEAM RECC.
- It's difficult to review the FSAR and see where all changes to a given system carry through. Observation
- Contractor groups brought on site are typically charged to perform a narrow scope of work, without cur looking at what else is impacted by their work. They do not typically look at FSAR impacts, and do not appreciate the impact of their work on our license bases. For example, PEG, a non-engineering group, brought in a contractor (NES) to do MEPL reviews. NES did as directed. However, in at least one area, the letdown line, NES performed a MEPL evaluation downgrading this line based on limited criteria. This violated the unit license basis, which credited this line for actions beyond those NES reviewed for. } Previously Identified - covered by CMO scope
- There is no easy way to retrieve and understand licensing commitments, and how they were satisfied. Observation
- Ensure the 50.54f review addresses FSAR section 3.6 figures and the stress data package-we may have lost control of revisions in this area. } by MPR + V/S
- Consider improving the clarity of the FSAR relative to the effects of the LNP on electrical distribution - Future systems and how the electrical distribution system operates.
- Diesel generator air start issue: what is really the design basis of the system, i.e., 5 starts from full pressure, or ?? Also, what constitutes a single failure for the diesel air start system?
- RHR Valve V-43 can inop. both trains of RHR-we credit operator action to preclude this-review. Observation
- FSAR Chapter 9 addresses Radwaste and aux. systems, including ventilation, which should be reviewed as part of this 50.54f effort. } TEAM RECC. in OPS. relation
- High humidity issue for the Switchgear Room Ventilation system } Consider for "Top 10"
- Electrical Specification #321 is being re-written again, but is not adequately used. Observation
- Review the TS surveillance program line by line, just like the FSAR is being reviewed. Establish a master tracking index for surveillances, which matches each TS to an ops form number and acceptance criteria in TS. } OZ Possibly
- Formerly, licensed personnel reviewed changes to surveillance. Now we used non licensed people. Have we dropped any TS required s or changed the intent of any surveillance inadvertently?
- There should be an auto clock system on surveillances, so all are done on time. } OBSERVATION/RECC.
- Were narrow range containment pressure instruments and channels deleted in error in 1990-1991? - FIND ANSWER
- In 1993, was the technical requirements review non conservative, so some requirements were deleted in error? } H L

H/L • We may have violated the FSAR about 1991, when we changed the heating system, for the charging pump area in the boric acid system. Power was supplied from four breakers via a bypass jumper-these breakers supplied emergency power for the fuel bldg. ventilation system per the FSAR. Despite FSAR words, this change happened anyway. I believe the breakers were credited in accident analysis. *Find Answer.*

Hypothetical question

Observation

Consider

Observation

part of CMP scope w/ emphasis by PT 2 TEAM

• MP-3 initially based its Ops, I&C and Maint. procedures based on draft Tech Specs. Later, these procedures were revised to reflect final TS. Could information have been lost in translation between draft and final TS?

• The quality of annual FSAR updates may have suffered when most were grouped toward the April-June time frame, versus being spread out more over the year.

• All FSAR reviews initially had engineer-supervisor-manager reviews initially; they do not now get this level of review.

• Initially, Jim Crockett and Carl Clement liked to see bases information when PDCEs were proposed by new engineers. This action resulted in few QA audit findings. Over time, it wasn't pursued.

• The drop off in Stone and Webster support after the unit went commercial was significant. There was no contingent of experienced engineers, who grew up with MP-3 left on site (for economic issues) to resolve backlog. There was a noted loss in continuity and design basis information due to this action. We may want to review the open items work list when S&W list and test how well it was dispositioned.

• Review E&DCR logs in the time from late 1985-mid-1986. Due to startup pace, there may be a vulnerability in major design changes in the E&DCR logs, which should be reviewed. *also → part of CMP scope w/ emphasis by PT 2 TEAM*

• There was no firm design authority in place in the post commercial operation days. There were lots of MP-Berlin telecons for doing work then. This may be a vulnerable period for FSAR integrity WRT design change process. *↑ covered by CMP scope & recs.*

H/L

• Review the process as we changed over from E&DCRs; DCRs; and DCNs for gaps and or vulnerabilities. *UPM to consider*

• The radwaste area may have systems credited for use in the FSAR which have been taken out of service. We need to first update drawings by deleting such equipment from them, then update the FSAR. We still lack the resources to do this, so it becomes a low priority job and gets pushed off. *part of report recs.*

H/L

• Add GL-89-10 to the DCR checklist *consider*

• Address abandoned systems generally WRT FSAR status. *part of report*

• Design Engineers need better training for the SPECIFIC systems they work with, somewhat like SE training, but not as detailed. *Observation*

• Review the adequacy of system and stress data packages. *part of scope*

• Commitments are still not tracked effectively. It's difficult to find out WHAT is open out there. *part of recs. & scope*

• We need more resources in programs like Appendix R and MEPL. *Observations*

• Review the EDGF sequencer mods. performed by I&C late in startup-they may be at odds with the FSAR. *part of PT 2 TEAM recs.*

• Look at ventilation systems vs. FSAR. *part of TEAM recs (GRP # 2)*

• Review information on how S&W interfaced with outside vendors on design issues (EDG sequencer; RSS; QSS). *part of TEAM recs.*

• We are overly conservative in doing simple mods., i.e., hinging grating requires a PDCR. The process should be made less complex in less critical areas. *Observation*

- The ACR process has too low a threshold, and significantly impacts SEs. *Observation*
- Welding gas piping (oxygen, acetylene) is largely still in place in containment post construction days. Does this impact FSAR assumptions? *Have Answered*
- Simplify the Work Control process. *Observation/recc. only*
- Train Engineering on how to use the FSAR. *part of overall plan*
- Leave SEs in place long enough to learn their systems. *Consider*
- Put more SEs in place. The work load is too heavy for some SEs. *Consider*
- Design changes done under the unit organization may not be properly captured in drawing updates. Some examples include: turbine bldg. instrument cal show installed without drawings; and lighting/fire protection system upgrades in the I&C shop. *same CMP scope looks of early period*
- Non safety related drawings were not always updated when equipment was changed out, i.e., by Chemistry and I&C. There was a lack of attention to detail here.
- There was a Level B ACR written for lighting and distribution panels and ops critical drawings, as researched by a task force. Ops is not confident in killing power to some of these loads. The issue is not looked at very well due largely to economic impacts. *pursue*
- Five years ago, management seemed to mandate the need for accuracy in work, like PDCRs. Now, the same feeling isn't there. *Observation*
- The rad monitor logic changes fixed the paperwork issues, but are not consistent with the FSAR.
- Westinghouse plans for Post Accident Monitoring are not compatible with a RG 1.97 graded approach. *H/L*
- Backlog may contain issues waiting to get us. *part of scope*
- Our culture has changed negatively. One time, there was a good focus on meeting Tech Specs. *Observation*
- We did not train personnel effectively in the licensing basis for the unit. *part of overall plan*
- We erred in cutting experienced SEs from the payroll post startup in 1986. *Observation*
- Time has since not allowed new SEs to come up to speed. They respond to day to day fires. *Observation*
- Se area is understaffed. Unit engineering was understaffed from 1986-1993. *Also ↑*
- Plant engineers did design changes, WITHOUT receiving any training in design and licensing basis during the whole backlog time frame. *basis for some CMP scope*
- Long term use of Bypass jumpers, coupled with engineer training issues. *part of scope*
- Look at how HVAC air conditioning units are actually operated vs. how they are designed to operate. Units typically operate at loads much lower than their accident design loads, which impacts their long term operation, i.e., HVQ equipment for the RSS cubicle. *TS&M recc*
- Review issues like RSS and determine their generic root cause applicability to other MP-3 systems. *under consideration*
- Workload precludes SEs from taking time to get a thorough knowledge of the FSAR and design and licensing basis for their systems in many cases. *Observation*
- The SE is supposed to be the focal point for system questions. However, some groups are allowed to interpret TS or FSAR sections without working with the SE. Recommend the SE be used as the true *opinion*

H/L

H/L

H/L

focal point to provide a standard interpretation of the FSAR, to avoid confusion. For example, there was a FSAR interpretation by Engineering that FSAR words "Start another SW pump" to restore SFP cooling meant that no SW pump could be taken out of service for maintenance. NU began to study this issue, at a cost of about \$400,000. A quick call by the SE and licensing to the NRC indicated this interpretation went BEYOND system design bases, and precluded the need to spend the \$400,000.

- The lack of a central repository for historical calcs, design information, etc. is seen as a shortcoming. *R. Cox Effort*
- Backlog issues impact daily workload *] Agreed part of scope*
- It is difficult to determine what are licensing commitments when proposing changes to programs. The possibility exists that such commitments can be inadvertently negated by what seem to be well researched actions. One engineer researched a series of valves proposed for deletion from the IST program (3-MSS-MOV-18A through-D) via PRA and the FSAR. PRA indicated these valves were not credited in PRA analyses, and could be deleted without safety impact to the unit. A review of the FSAR indicated these valves also were NOT credited in the FSAR. A chance discussion about these valves with a MP-3 Licensing Engineer, with a long history on the unit, indicated they had been credited and addressed by what amounted to a "hidden" licensing commitment. Upon knowing this, they were maintained in the IST program. *] part of MP scope*
- I&C uses a check off sheet on each procedure and surveillance change, which includes a block addressing FSAR impact. This practice was based on a PORC question years ago, and ensures close correlation between the FSAR and department procedures and surveillances. *] Good Practice!*
- Evaluate the SE system Descriptions to ensure they accurately reflect the FSAR. Some System Descriptions documents are occasionally at odds with the FSAR. *] Implicit in Scope*

ATTACHMENT F

Adverse Condition Report Transmittal Sheet

ACR# 13302

Approved By: [Signature] SORC#: 95-46 Effective Date: 11-9-95

Summary ACR Information

ACR Title Unit 3 Specific ACR to Address Generic Implications of U-1
ACR-07007

Unit(s) affected by this ACR: MP1 MP2 MP3 MP Site Other:

Coding Factors

<p>Keywords:</p> <p><u>3,5</u> <u>Unco, Decn</u></p> <p><u>CHMG, CONC</u> <u>NRC, EXTO</u></p> <p><u>USFA, DESB</u></p>	<p>Action Resolution:</p> <p><u>ESB</u> <u>OAZ</u></p> <p><u>OAB</u> _____</p> <p><u>OAI</u> _____</p>
---	---

ACR Significance Level: A B C D

Coding Factors Codes:

Failure Mode Code(s)	Failure Cause Code(s)	Human Performance / Programmatic Cause Code(s)
_____	_____	_____
_____	_____	_____
_____	_____	_____
<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A

Distribution List Pre-Investigation Transmittal Post-Closure Transmittal

Name	Organization	Location	Code	A/R Number
<u>George Pilman</u> (ACR Initiator)	<u>3MGR Dis Eng</u>	<u>475-4</u>	<u>Lead</u>	<u>9006306</u>
<u>McGuinness</u> (System Engineer)	<u>3MGR</u>	<u>475-4</u>	<u>Supt</u>	<u>5-10-96</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<input type="checkbox"/> Send final results of investigation to NPRDS				

by Kim Burton Extension 4325 Date 5-9-96
(Events Analysis Coordinator)

**Adverse Condition Report
Lead Investigator Assignment Sheet**

ACR# 13302

Approved By: [Signature] SORC#: 9546 Effective Date: 11-9-95

As Lead Investigator, you are required to complete your determination of causal factors and development of the corrective action plan, and have the required reviews completed in accordance with the following requirements. If you have questions about the assignment, contact the assigned Events Analysis Coordinator.

Required causal factors determination process:

- Root Cause Determination in accordance with NGP 3.15. Provide results and reviews as specified on Form RP 4-7.
- Apparent causal factors determination. As appropriate, use NGP 3.15 as a reference. Document results and reviews on Form RP 4-7.
- Identify corrective actions required for this adverse condition and document on RP 4-7, pages 3 and 4. (No causal factor determination required.)

Required operating experience reviews:

- PIRs/ACRs - Review the PIRs or ACRs identified below for similar or related events.

Continuation Sheet
- LERs - Review the LERs identified below for similar or related events.

Continuation Sheet
- PMMS Maintenance History - Search the PMMS database for the affected systems, structures and components (SSCs) and related SSCs. The search should go back five years.
 NPRDS - Contact a Maintenance or I&C NPRDS coordinator and request a NPRDS search for similar or related components.
- INPO Information - Review the INPO and industry operating experience information listed below:

Continuation Sheet
- Other

Continuation Sheet

Required evaluations to support investigation. As lead investigator, you are required to initiate or coordinate (such as in the case of operability and reportability determinations) these evaluations.

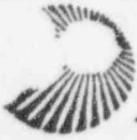
- Operability Evaluation - Lead individual: _____
- Reportability Determination - Lead individual: B. McGuinness
- PSSH (NGP 2.01) - HPES Evaluation - JCO (NGP 2.29) - MRFF - Other: _____ - None

Is an LER or other written report to the NRC required or potentially required?

- No - Yes - Type of report: - LER - Other: _____ Required submission date: 6-6-96
 Lead individual for report preparation: B. McGuinness

The following individuals / groups must review the causal factors and corrective action plan:

- a. Management up to and including the following:
 - Manager/Department Head: _____ - Director: MP3 - Vice President
 - Other individuals or groups:
 - QAS _____ - _____ - _____ - None
- c. Oversight review groups:
 - PORC - MP1 - MP2 - MP3 - _____ - _____ - None



Northeast Nuclear Energy

Adverse Condition Report Initiation Form

ACR# **Nº 013302**

Approved By: [Signature]

SORC#: 95-46

Effective Date: 11-9-95

Provide the following information to the best of your ability. Provide enough information so the issue can be understood by others who will review it. Refer to instructions on the back of this form.

If you feel the adverse condition could have an immediate effect on plant safety, the ability of plant equipment to operate properly, or someone could be injured if the issue is not addressed immediately, NOTIFY your Supervisor or the Shift Supervisor in the Control Room immediately.

Adverse Condition Information Initiator completes blocks 1 - 10 Print all information.

1. Initiated by: GEORGE R. PITMAN Unit/Department: MP3 Extension: 4287
(Print)

2. Describe the adverse condition: (The back of this form lists the type of information you should include)

SEE ATTACHMENT

Continuation Sheet

3. Personnel questionnaires attached? No Yes - By Whom? _____
Others being prepared? No Yes

4. What initial actions were taken as a result of the adverse condition? Provide reference to items such as AWO, TR, NCR, EWR, etc.

MP3 is being maintained shutdown while a Configuration Management Plan (CMP) being developed and implemented in preparation for responding to the NRC's CFR 50.54(f) letter.

Continuation Sheet

5. What do you know or suspect was the cause of the adverse condition?

SEE ACR 7007 EVENT REVIEW TEAM REPORT generic Implications

Continuation Sheet

6. What do you recommend as corrective action(s)?

COMPLETION of unit-specific assessments of adequacy of MP3 CMP

Continuation Sheet

7. Date: 5/7/96 Time: 16:25 8. Unit(s) affected by ACR: MP1 MP2 MP3 MP Site Other:

9. What structures, systems and components are affected? (Use PMMS ID if known.) 10. Is material being held? No Yes - What and where?

To be identified by CMP

ACR Review Ensure all pertinent information is provided and initial actions are sufficient.

11. Supervisor Review with Initiator: (Print Names & Dates) GEORGE R. PITMAN 5/7/96

a. Is immediate ACR closure recommended? (No further investigation or corrective action required) Yes No

b. System Engineer notified? N/A Yes - Name _____

c. How discovered ACR 7007, RECENT FINDINGS & NRC's (CFR 50.54(f)) letter

d. Should the ACR be reviewed by a Shift Supervisor?
 Yes - Immediately take or provide to the affected Shift Supervisor(s)

No - Forward to the Events Analysis Department (Millstone Building 475, 5th floor/ FAX 5522)

Initial Shift Supervisor Review (if ACR went to SS):

Does ACR have an actual or potential adverse effect on safety, operability, reportability or plant operation?

Yes - Process using Form RP 4-3

Name of Shift Supervisor: D. ARNOLD HURST
(Print)

No - Retain ACR in Control Room

ACR No. 13302

2. Description of Adverse Condition:

Recent findings relative to the license and design bases for MP3, and to the processes involved in maintenance of configuration of these bases, has called into question, the level of confidence as to the unit's compliance with these bases. Findings include, but are not limited to, the generic implications of ACR 7007-identified root causes and the degree to which MP3 has been affected, the NRC's recent inspection team findings and self-identified findings such as the QSS/RSS and AFW issues.

Adverse Condition Report

Shift Supervisor Review

ACR # 13302

Form RP 4-3 Rev. 1 Page 1 of 1

Enter ACR# 13302

Approved: D.B. Miller Jr.

SORC: 95-46

Effective: 11-9-95

Provide the following information to the best of your ability. Refer to instructions on the back of this form. If during your review additional information is required, request the initiator or other individual to provide it, or provide it yourself. Ensure required prompt or immediate reporting requirements are satisfied prior to completing this form.

Plant Conditions: Mode: 5 Rx Power: 0% RCS Temp: 133 °F RCS Pressure: 43 PSI

Are initial corrective actions sufficient? Yes No—Describe any additional actions taken or required:

Are any of the affected structures, systems or components (SSCs) safety-related, or covered by Technical Specifications (TS) or the Technical Requirements Manual (TRM)? Yes (Complete 3A) No =>(Go to Section 4)

A. List affected SSCs and applicable TS / TRM Section(s):

All systems listed in support of design basis will be addressed by separate ACRs as questions arise

Are these structures, systems or components OPERABLE? Yes (Go to 4.) No (Go to 3B) Uncertain (Go to 3C)

B. Which ones are not OPERABLE and why:

C. Describe actions being taken to resolve uncertainty:

Lead individual responsible to resolve:

Ext.

Is the ACR REPORTABLE? Yes (Complete 4A & 4B only) No Uncertain (Complete 4A & 4C only)

A. Report Category: A (prompt/immediate)—attach a copy of Nuclear Incident Report Form

B (30-day LER) C (Public Interest) FFD (Public Interest) Other:

B. Why is the ACR REPORTABLE:

C. Describe actions being taken to resolve uncertainty:

Separate ACRs for specific questions will address reportability concerns for those items

Lead individual responsible to resolve:

Ext. _____

Is an immediate investigation or a Post-Trip / Transient Review (PTTR) required?

No Yes—Name of Investigation Team Leader: _____

Ext. _____

Personnel Contacted:

Duty Officer (all ACRs): R. Martin

Date/Time: 5/8/96 1130

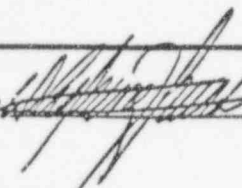
Other (specify):

Date/Time: _____

Other (specify):

Date/Time: _____

Signature and Print Name

 D. ASHURST

Date/Time 5/8/96 1130

Comments:

Adverse Condition Report
Management Review

ACR # 13302

Form RP 4-4 Rev. 1 Page 1 of 1

Enter ACR# 13302

Approved: D.B. Miller Jr.

SORC: 95-46

Effective: 11-9-95

Refer to instructions on the back of this form. If during your review you consider additional information is required, request the supervisor to provide it, provide it yourself or request assistance from other individuals.

Was the ACR processed through the Shift Supervisor (SS) using a Form RP 4-3? Yes (Complete 1A & 1B only)
 No (Complete 1C, 1D & 1E only)

The Duty Officer completes this box: Print Name: R.F. MARTIN

A. Is the Operability Determination complete? N/A Yes No—Identify actions underway to resolve:

B. Is the Reportability Determination complete? N/A Yes No—Identify actions underway to resolve:

Separate ACR's to be written for any items found

The Events Analysis Coordinator completes this box:

C. Should this ACR be reviewed by the SS? No Yes—Take or provide ACR to the appropriate SS(S)

D. Are initial corrective actions sufficient? Yes No—Describe any additional actions taken or required:

E. Should the ACR be reviewed at a unit morning meeting? No Yes—Process this form at the morning meeting:

When can the ACR be closed following initial review? Yes (Complete 2A & 2B) No (Complete 2B only)

Basis: For Belongs in another problem reporting system:

Closure Low significance, cause is understood, corrective action complete or identified in AITTS, and no generic implications.

Other reason (explain):

B. What is the ACR Significance level? A B C D

What additional evaluations are required during the investigation?

PSSH (NGP 2.01) HPES Evaluation JCO (NGP 2.29) MRFF Other: None

What additional reviews of the investigation results and corrective action plan are required?

PORC MP1 MP2 MP3 Other: None

Assignments

A. Lead Investigator: G. Pitman

Comments: _____

B. Other Assignment: _____

Comments: _____

Completed by: (Print)

Comments: R.F. MARTIN

Date/Time: 5/8/96

Revised by: (Print)

Comments: _____

Date/Time: _____

JW1
RE IS A COPY
THE LATEST.
WAY

NORTHEAST UTILITIES

ROOT CAUSE INVESTIGATION

MILLSTONE UNIT 2

EIGHTY SEVEN ACRS HAVE BEEN GENERATED OVER THE LAST YEAR
FOR CONFIGURATION CONTROL ISSUES

DRAFT

PREPARED BY:

Lead Investigator, William A. Price / Date

Evaluation Team Member, John P. Padden / Date

REVIEWED BY:

Supervisor, Steven W. Wainio / Date

CORRECTIVE
ACTIONS

CONCURRED WITH:

Responsible Manager, Michael F. Ahern / Date

APPROVED BY:

Director, Raymond P. Necci / Date

EXECUTIVE SUMMARY

Incident Condition Report (ACR) No. 8761 was initiated by the Millstone Unit 2 Unit Director to investigate configuration control deficiencies and ~~focus specifically on the fundamental causes of why Millstone Unit 2 drawings and specifications of record do not match the actual plant configuration~~.

Eighty-seven (87) ACRs generated within the last twelve (12) months relating to configuration control issues are the result of a positive culture change. This resulted in lowering the Unit's threshold for initiating ACR's, use of tracking and trending tools; with a focus on corrective action to prevent a class of recurring issues.

Not all configuration control discrepancies are identified by the ACR program. One Hundred Plus (100+) administrative type ~~Design Change Notices (DCNs)~~ ^{drawings} have been generated (during the same time period) for administrative drawing update for configuration control discrepancies. We anticipate that more configuration control issues will be occurring after the completion of this report and feel strongly that ~~the configuration control issues is our principal weakness associated with our 60:54 effort.~~

The following are deemed as root causes:

The terminal event for this root cause evaluation is that ~~THE DRAWINGS OF RECORD DO NOT MATCH THE ACTUAL PLANT CONFIGURATION~~. The fundamental cause appears to be Inadequate Administrative Controls. The contributing factors are: past modifications made to the plant without a design control process, improper installation of design modifications and design modifications made without drawing update. In addition, numerous Field Change Notices (FCNs) and Non-Conformance Reports (NCR) generated by Bechtel as part of their construction effort never included in our design drawings upon construction turnover and plant start-up.

~~Management standards and Oversight standards were too low.~~ Their primary focus was "day to day" emergent activities to keep the plants operating while elimination of long term backlog was limited by budget consideration. This took away essential resources from activities such as backlog reduction, procedure updates, training and project closures. Insufficient planning and budget restraints influenced what work was done. History reflects that management's action, when taken, was reactive, ineffective and only partially implemented.

~~The establishment of Design Engineering as the Design Authority has reduced, but not eliminated, the amount of configuration control issues.~~ Improper installation of design modifications has occurred over the last several years due to improper work habits, inadequate work procedures, insufficient resources, lack of communication, departmental guidelines, and training. This list of concerns is further amplified and challenged when design modifications are implemented in a highly reactive mode. Design Changes resulting from concerns associated with long standing Plant Material Conditions and requiring an expedited response to address operability, affords little opportunity for sufficient planning or a thorough design review.

~~Regaining design configuration control will require training and extensive review of past modifications and field walkdowns.~~ There is a need for continued use of tracking and trending tools with a focus on corrective action to prevent recurring issues. Management should focus on task completion, scheduling compliance and performance of success criteria for processes and programs.

1.0 INTRODUCTION

1.1 EVENT DESCRIPTION

Within the last 12 months 87 Adverse Condition Reports have been generated of which most identify configuration control deficiencies between Millstone Unit 2 drawings/specifications of record and the actual plant configuration. This Root Cause Evaluation shall evaluate the issues, determine if programmatic weakness exists and determined if additional corrective actions are warranted.

1.2 SCOPE

As a result of the events that were identified during the period of March 1995 through April 1996 at Millstone Unit 2, a Root Cause Evaluation was established to investigate each ACR that was related to a configuration control issue.

The Review Team performed a root cause analysis using the guidance in NGP 3.15, "Root Cause Evaluation Program." The following methods were used during the investigation:

- Event and Causal Factor Charting was the primary tool used during this investigation. The method was used to identify the sequence of events and the causal factors contributing to those events.

Barrier Analysis was used to help identify the barriers that could have prevented the event from occurring if they were not overcome.

- Change Analysis was used to a limited degree to assess what differences existed in the plant, procedures and Engineering Organizational changes with respect to ownership and responsibility.

2.0 REFERENCES:

- Review of all applicable ACRs.
- Review of ACR 7007 "Millstone Unit 1 FSAR Inaccuracies."
- Event Review Team Investigation, Millstone unit 2, "Service Water Strainer Backwash System Problems."
- Memo No. DE2-96-009, TO: R.P.Necci From: S.A.Sudigala, Titled: "Bi-Annual Report Assessing PDCR DCNs / Attachment #5 DCNs and Administrative DCNs for Millstone Unit 2."
- Memo No. DE2-95-1032, To: Unit 2 PORC, From: S.A.Sudigala, Titled: "PORC commitment 295-030, Identification of valves downstream of Root Valves."
- Grits Adhoc report for all Code 8 Design Change Notices (DCNs).

3.0 COMPILATION OF FACTS:

The following ACRs are examples of the Configuration Control issues that were reviewed during the investigation. Not all are discussed below, but they are bound by the conclusions and recommended corrective actions.

MODIFICATIONS MADE WITHOUT DRAWING UPDATE

Improper Work Practices Lack of Attention to Detail

ACR 2030 ISI drawings of record do not match the mechanical and stress isometric of record

Inservice Service Inspection drawings were created in the early 80's using the Mechanical and Stress isometric drawings of record. They were placed in the NU nuclear records system in 1992 time frame. During the period between the creation and actual placement into the system there were modifications and programs such as Bulletin 79-14 which cause revision to the Mechanical and Stress drawings. These changes did not get updated on the ISI drawings until recently. When the ISI drawings were placed in the Nuclear records system there was not any reconciliation from the time of creation to the time of submittal, causing the ISI drawings to be inaccurate. EWR 2-96-0003 was initiated and is currently working to correct this problem.

ACR 2516 Valve removed from Clean Liquid Rad Waste

Bechtel field change notice (FCN) no. H-87 was implemented in the mid 70's to remove a valve from the system, but there was not an effort to update the drawings. This went undetected until the initiation of this ACR. A search in Nuclear Records is underway to determine if there are any other field change notices that may have been implemented by Bechtel which did not update the drawings.

ACR 7424 Facility 1 and Facility 2 Separation for Hotwell Annunciator Cables

Facility 1 annunciator wires are in contact with Facility 2 power/instrument cables in rack C181. Improper facility separation, poor work practice, original plant installation.

Lack of Resources Priority on Emergent Work and "Fire Drills"

ACR 510, 1155, 1517, 2215, 2217, 2241, 3083, 4154, 5572, 8032 and 7309

All of the above ACRs are related to the replacement of material in the plant for mechanical piping systems. Incorrect Bolt material, the wrong type of pipe and pipe flanges were replaced in the plant without regard to the Mechanical Piping Specification ME-668 requirements. After further review it was determined that the specification may have been the cause of these events. The specification procedurally requires a revision after the sixth Design Control Notice (DCN) is initiated. This specification went unchanged

beyond seventeen DCNs that appears to have caused difficulty in gaining an understanding of the current specification requirements.

ACR 364 Fuse Label different than schematic drawing

Wiring drawing was up to date, but the 125V distribution drawings have been in error since original construction. Resources exhausted with priority on emergent work and fire drills. Low priority on reviewing drawings for correctness.

IMPROPER INSTALLATION of DESIGN

Lack of Attention to Detail

ACR 8490 Containment Sump Screen Replacement

The sump screens were damaged and required replacement, new screen was ordered with the correct mesh size but was received with a larger size mesh opening. This effected the FSAR and required replacement recently. This was a safety significant event and reported per LER no. 93-008.

ACR 399 Non-Category 1 lamps installed in Category 1 application

Category 1 bulbs required per design were replaced with non-QA bulbs. This discrepancy was discovered during performance of position indication test per AWO M2 095-06234.

MODIFICATIONS MADE WITHOUT A DESIGN CONTROL PROCESS

Standards Were to Low

ACR 3462 2-HD-44A/B Check Valve Internals were remove in 1977 by memorandum

The removal of internals was technically justified within the content of the memo, but the drawing of records were not up dated to detail this change. Interviews with personnel who worked for Millstone 2 in this time period have indicated that it was not unusual to change the plant by such documents as memorandum. The memo was retrieved from the Maintenance departmental historical files. Further review of the historical files are required to determine the need for proper drawing update.

ACR 465 Appendix "R" spare RBCCW motor bearing temperature instrument is a thermocouple and should be an RTD.

The motor was purchased in 1986, and it was not known that the motor was supplied with thermocouples and not RTDs. The field leads were connected to TE-6269 and TE-6270 on the AWO lifted lead sheet. The control room was called to verify that the temperature indication was normal. The Control Room indicated that the temperature readings were failed low. All connections were double checked and then the RTDs were read with a DMM. Readings from the DMM indicated the sensor was most likely a thermocouple

instead of an RTD. AWOs were started to investigate the problem and confirm the initial findings. It was found that the sensors were not RTDs but were thermocouples as expected.

4.0 GENERAL CONCLUSIONS:

Millstone 2 loss of design configuration control was due to a broad set of causes. Many barriers were ineffective in preventing the loss. This is indicative of Management Standards being too low.

Improving standards at Millstone 2 over the last two years increased awareness of our loss of design configuration. The implementation of the ACR process and the Unit Director's support to lower the threshold resulted in the new Unit Director's recognition of a trend and initiation of ACR 8761.

The number of Plant Design Change Reports (PDCR) and Plant Design Change Evaluations (PDCE) were compared to (Attachment 7.2) Plant Generated Design Change Notices (DCN-P) and Design Change Requests (DCR-P). PDCRs & PDCEs decreased in numbers from 1974 to 1995, but the amount of drawing requests increased. This appears to indicate that between 1974 to 1990 drawing configuration updates may have been omitted.

During the review of adverse condition reports and code 8 DCNs it appears that drawing updates for NCRs which have a disposition of "use as is" and "repair" were rarely initiated.

Numerous configuration control issues were left unresolved on the day MP2 went commercial. This is due to the large number of Bechtel generated Field Change Notices (FCNs) and Non-Conformance Reports (NCRs) that were never incorporated or tracked against the design drawings.

Several configuration discrepancy concerns relating to the identification of valves downstream of root valves on the Piping and Instrument Diagrams (P&IDs) are continually addressed in ACRs. In November 1995 Design Engineering recommended to PORC that the numbering and detailing of drawings for instrument valves would be addressed on a case by case basis. It appears that there is not any requirement to detail instrumentation valves and the high cost associated with such an activity was the rationale for Design Engineering recommendation.

5.0 RECOMMENDED CORRECTIVE ACTIONS:

5.1 COMPLETED:

Management standards have been raised at Millstone 2 as indicated by the self identification of this adverse trend.

The ISI drawings were updated.

The containment sump screen was replaced.

5.2 SHORT TERM CORRECTIVE ACTIONS:

Raised standards are needed in Design Engineering to prevent a lack of resources from resulting in procedure noncompliance.

Specification SP-ME-668 should be revised to include all open DCN's in accordance with Procedures.

Use of DCNs for drawing update without a parent document or 10CFR 50.59 evaluation should cease except for purely administrative changes.

Walkdowns to verify that electrical Z1 through Z4 facility separation at MP2 meets the requirements of IEEE-279-1971 and MP2 electrical separation criteria (Dwg 25203-33001) with specific attention to control panel wiring separation per SEC 3.0 control panels and devices. Facility Z5 verification has been completed (ACR 504 and EWR 2-95-00056).

5.3 LONG TERM CORRECTIVE ACTIONS:

All of the adverse conditions identified in this report are logged and must be corrected.

The results of this evaluation should be shared with other units.

Improved training in design control should be implemented to avoid future undocumented modifications.

A review of all previous Design Changes, Department records and Bechtel FCNs and NCRs should be performed to identify any needed changes to the plant or configuration documents.

System walkdowns should be performed paying particular attention to flow choke points where loss of design configuration control has been safety significant.

Trending of adverse conditions by the oversight function needs to improve.

Staff augmentation to satisfy short term backlog following outages should be trained and readily available to incorporate information into design documents (i.e. drawings, procedures and specifications). Provide resources for the backlog of DCN incorporation. Procedures' writers should Query the GRITS data basis for instances where specifications have more than 6 DCNs and process specification updates as needed with final review, comments and sign-off by Engineering.

Reassessment of the original recommendation that was made in 1993 by Design Engineering which addressed verification of instrumentation valves down stream of the root valves.

Update Production Maintenance Management System (PMMS) with more accurate and complete information.

Develop one line drawings for 480V AC distribution and classify them as "Operations Critical".

Develop load summary sheets for 120V regulated AC instrument distribution panels VR11 (FAC.1 and VR21 (FAC.2).

6.0 COMMENTS:

It must be noted that standards do and should get higher over time. The past standards on design configuration control were too low to meet legal requirements for procedure-compliance. However, concern for public and personal safety has been high and rising over the entire twenty years of Unit Two's operation. Consequently, only two of the eighty nine ACRs had any safety significance. In those cases the significance was low because the condition was identified before the equipment was needed to perform its safety function.

7.0 ATTACHMENTS:

7.1 Event and Causal Factor Chart

7.2 PDCR, PDCE, DCR-P, DCN-P and LER Graph

7.3 Listing of 87 ACR for Trending of Configuration Issues

7.4 Bi- Annual Report Chart Assessing PDCR DCNs/ Attachment # 5 DCNs and Administrative DCNS for Millstone Unit 2, Dated Jan. 9, 1996.

7.5 GRITS Adhoc report for Code 8 Administrative DCNs.

● PRIORITY WORK

● URGENT ISSUES

● LACK OF COMMUNICATION & TRAINING W/ FIELD OR VENDOR

● LACK OF QUESTIONING ATTITUDE

● STANDARDS TOO LOW

● LACK OF RESOURCES

● INSUFFICIENT PLANNING

● MANAGEMENT DID NOT REALIZE SIGNIFICANCE

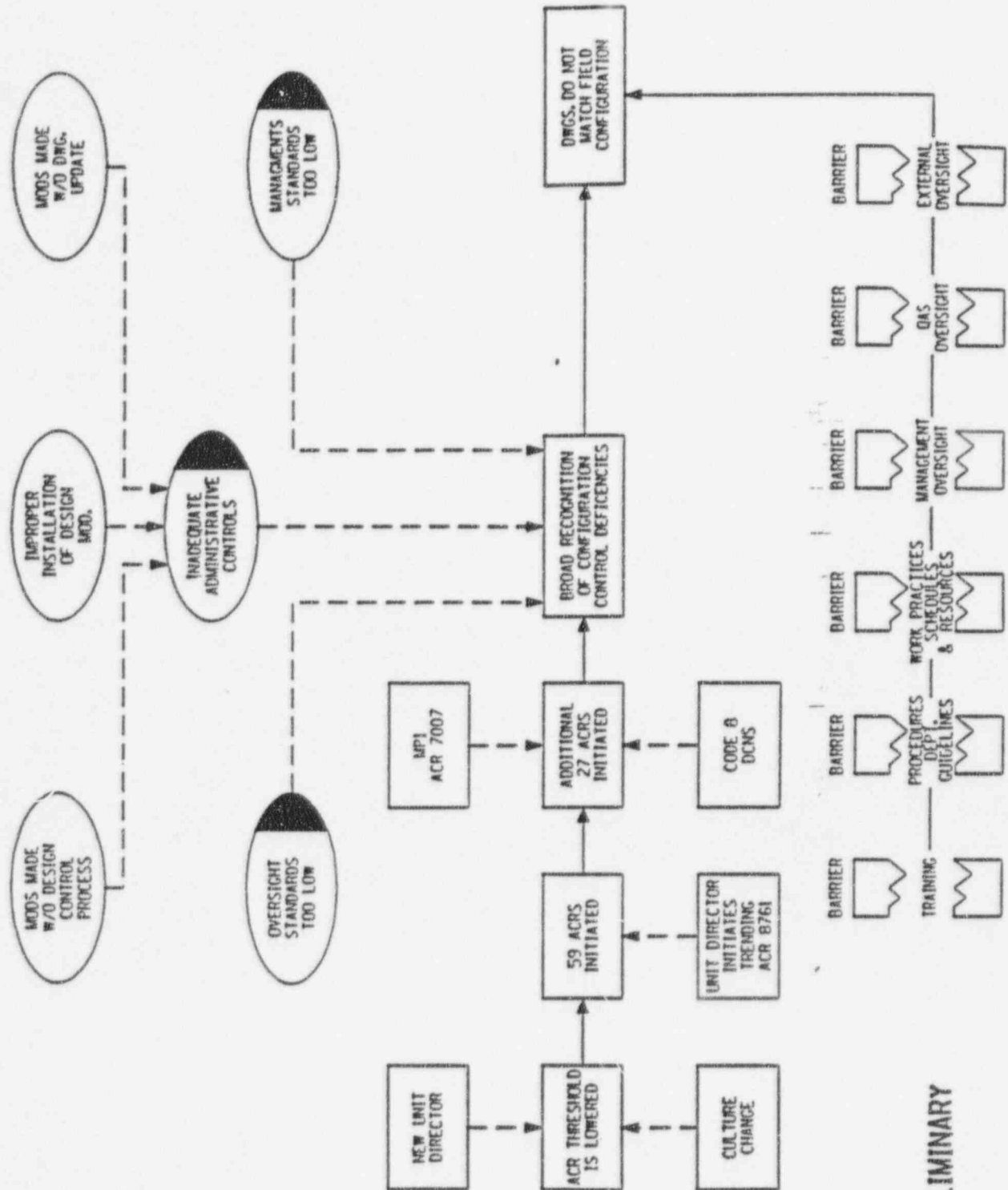
● LACK OF CENTRALIZED DOCUMENT CONTROL

● IMPROPER WORK PRACTICES

● LACK OF OWNERSHIP TOO MUCH DEPENDANCE ON VENDORS & CONTRACTORS

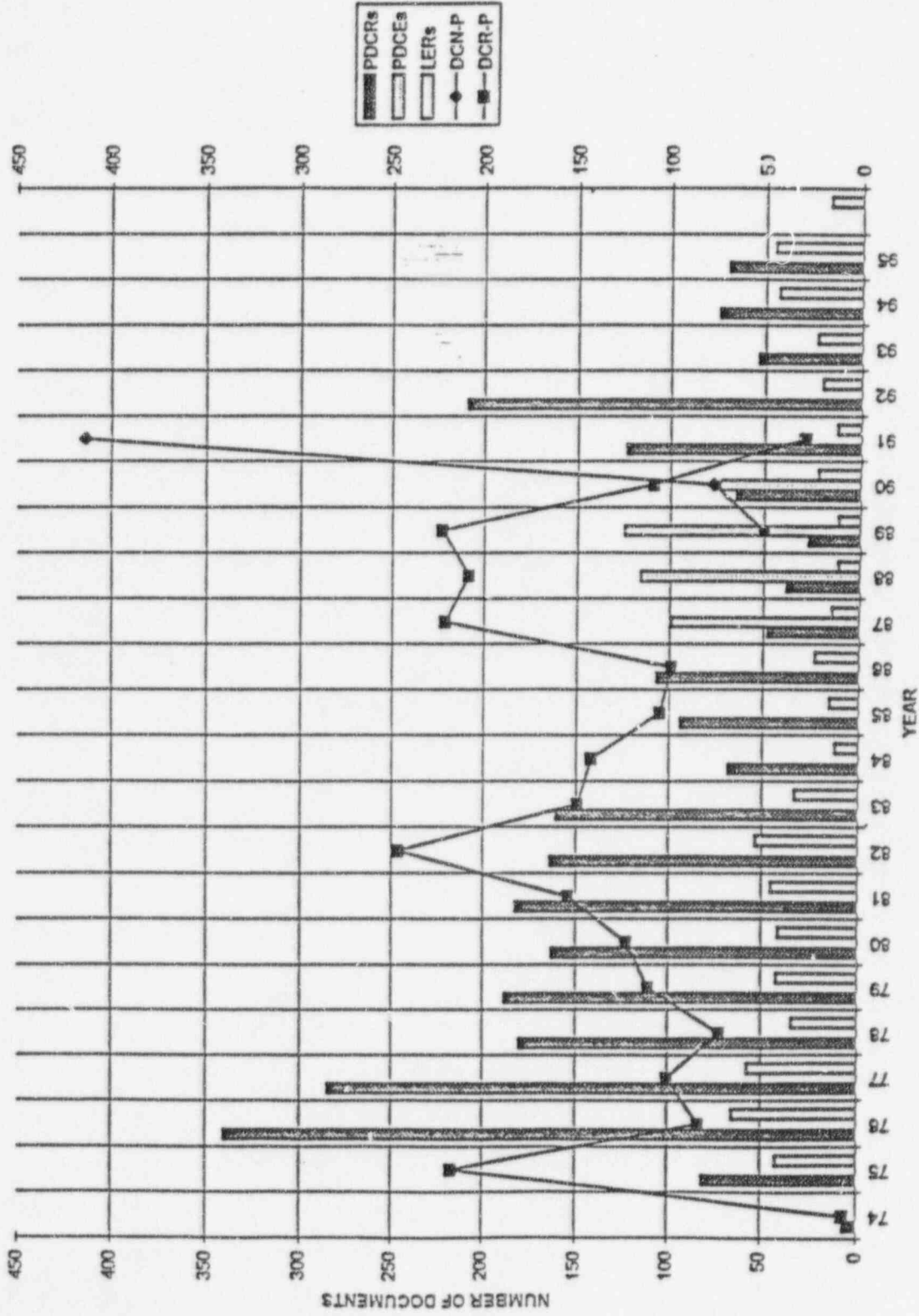
● PROCEDURES INADEQUATE

● LACK OF TRAINING



PRELIMINARY

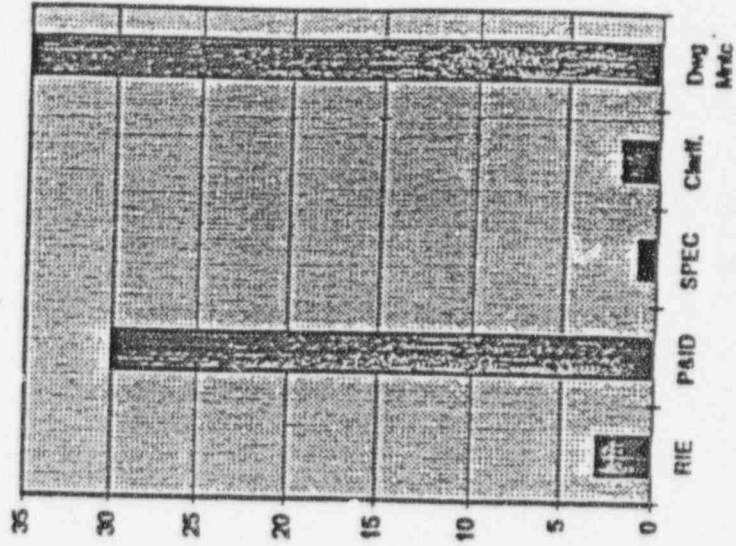
CHANGE CONTROLLED DOCUMENTS MILLSTONE UNIT 2



TREND ANALYSIS FOR DESIGN CHANGE NOTICES

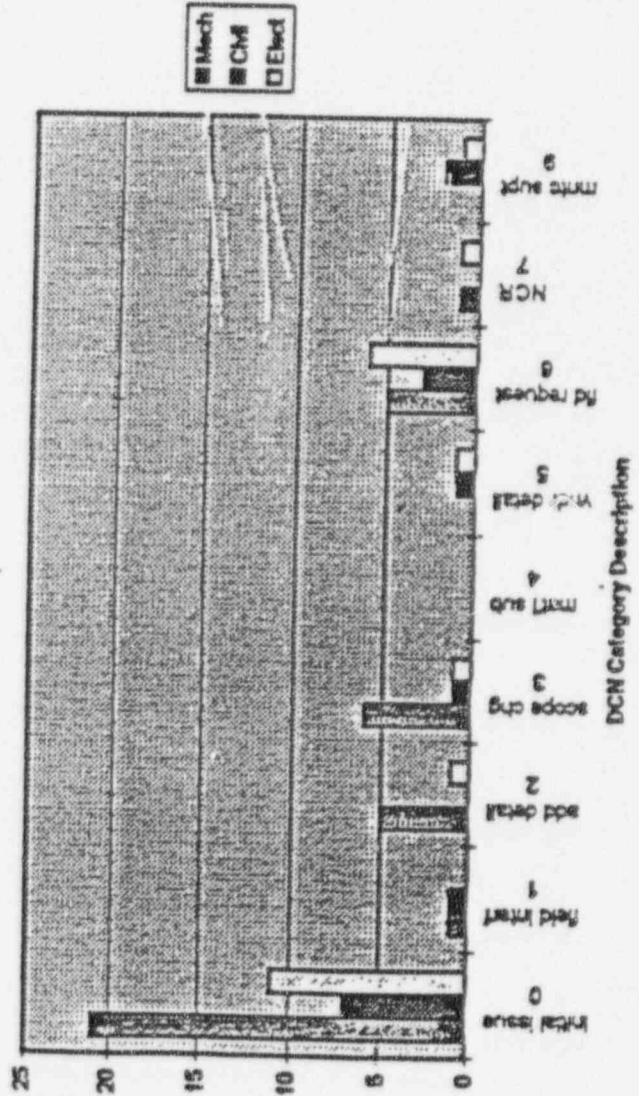
UNIT / GROUP		ATTACHMENT No. 2										
		DCN CATEGORY CODES										
Code	initial issue	field interf	add detail	scope chg	mat'l sub	vndr detail	fld request	NCR	mmtc supt	admin dcn	Total	
mp2	21	1	5	6	0	0	5	1	0	39	78	
	7	1	0	1	0	1	3	0	2	1	10	
	11	0	1	1	0	1	6	1	1	31	53	
	39	2	6	8	0	2	14	2	3	71	147	

DCN Category Code 08



Types of DCNs

Design Change Notices by Discipline



BT CRITERIA: ALL DCNS FOR UNIT DWG FOR DISCIPLINE E AS OF 05/25/96

NUMBER	STATUS	APPROVAL DATE	CLOSE DATE	DISCIPLINE CATEGORY	PDCR #	DESCRI
	5 UIC	072595		E08		SOLENOID VALVE MODEL CHANGE
	7-95 UIC	080495		E08		FUSE *CD* LOCATION ON DISTRIBUTION SUMMARY
5-0964-95	UIC	080995	051396	E08	NA	DIESEL GENERATOR DRAWING UPDATES
5-1044-95	UIC	081495	081495	E08		ADD WALL MOUNT PNL C100 CS17 CS18 TO CNTRL RM GEN
5-0852-95	UIC	081795		E08		ADD LIMIT SWITCH CONTACTS TO SCHEM DWG FOR MOV
5-1045-95	UIC	082195	082195	E08		ANNUN CABLE ROUTING UPDATE AND TERM BOX ID UPDATE
5-1103-95	CLO	091495	091495	E08	2-95-046	TEST PLAN FOR EMERGENCY LIGHT L92-4-88
5-1123-95	UIC	091595	092695	E08	2-94-002	REPLACE MOTORIZED VALVE ASSEMBLY FOR RM-8122A & B
5-1090-95	UIC	091595	091895	E08		REVISE BLOCK DIAGRAM PG: PERSONNEL ALERT SYSTEM
5-1124-95	UIC	091495	091895	E08		ELECTRICAL SEPARATION CRITERIA DRAWING UPDATE
5-1118-95	UIC	091495	091895	E08		ADD SECURITY DIST PNL DATA TO OPAL DATABASE RECORD
5-1098-95	UIC	091895	091895	E08		MS/R 1A & 1B FIRST STAGE DRAINS HV-4547 DWG UPDATE
5-1026-95	UIC	091995	091995	E08		ESAS MODS CYCLE 12 - SCHEMATIC DRAWING INTERFACE
5-1132-95	UIC	092195		E08		ERDS SPECIFICATION (SP-EE-347) UPDATE
5-0805-95	UIC	092195	092295	E08		INDENTIFY FUSE *BFAN* & CKT ON PNL D11 SUMMARY SH
5-1143-95	UIC	092795	092795	E08		2HVY-FN2 2HVY-FN3 & 2HVY-AOD21 2HVY-AOD22 CPF DWG
5-1166-95	UIC	092995	100295	E08	2-95-059	HYDROGEN SEAL OIL TANK HI/LO LEVEL ALARM
5-1042-95	UIC	100595	100695	E08		FEEDWATER & CONDENSATE LEVEL SETTING DISCREPANCIES
5-0893-95	UIC	101295		E08		LC-227 FACILITY ISOLATION CLARIFICATION
5-1072-95	UIC	101295	101395	E08		MOISTURE SEPERATOR/REHEATER T707 & SCHEMATIC UPDAT
5-1265-95	UIC	110195		E08		POST ACCIDENT HYDROGEN MONITORING SYSTEM
5-1285-95	UIC	111695	050996	E08		REPLACEMENT OF TRAVELING SCREEN DRIVE MOTOR HANDSW
5-1237-95	CLO	112295	112295	E08		LIGHTING PANEL LOAD VERIFICATION
5-1186-95	CLO	112795	112895	E08		COMPUTER ID POINTS UPDATE
5-1287-95	UIC	112095	112895	E08		CABLE DESCRIPTION REPORT B61 ADDITION
5-1252-95	UIC	112095	112795	E08		REPLACEMENT OF TEMPERATURE RECORDER TR-4510
5-1091-95	UIC	112895		E08		STACK SAMPLE FANS (MF41A & MF41B) DRAWING UPDATES
5-1311-95	CLO	112995	112995	E08	2-93-034	CST TRENCH SUMP PUMP PAID UPDATE
5-0215-95	UIC	120395	120495	E08		RCP SPEED SENSING DRAWING UPDATES
5-1315-95	CLO	113095	113095	E08		COMPUTER ID POINTS UPDATE ADDITIONAL POINTS
5-1255-95	CLO	120895	120895	E08		COMPUTER ID POINTS UPDATE
5-1280-95	CLO	121395	011996	E08		A/R 95049167-16 FUSE DOCUMENTATION
5-1 95	CLO	121395	121495	E08		COMPUTER ID POINTS UPDATE
5-1 95	CLO	122095	122095	E08	2-95-066	CABLE DESCRIPTION REPORT ADDITIONS
5 95	CLO	122195	122295	E08		COMPUTER ID POINTS UPDATE
5 95	CLO	121395	122295	E08		EDG DWG. UPDATE TO REFLECT PMMS TAG NOS.
5-1288-95	CLO	122895	122995	E08		COMPUTER ID POINTS UPDATE
5-1304-95	CLO	122895	122995	E08		COMPUTER ID POINTS UPDATE
5-1346-95	CLO	122195	021296	E08	2-95-010	PDCR 2-10-95 TEST PLAN REQUIREMENT CHANGE
5-0013-96	UIC	010596	010596	E08		2CND-PNL03 DRAWING UPDATE
5-0015-96	UIC	010996		E08		POST ACCIDENT HYDROGEN MONITORING POWER
5-1214-95	UIC	011296	031896	E08		FUSE IDENTIFICATION FOR 125V DC VITAL DIST PANEL D
5-1215-95	UIC	011296	031896	E08		FUSE IDENTIFICATION FOR 125V DC VITAL DIST PANEL D
5-0806-95	UIC	011296	031896	E08		FUSE IDENTIFICATION FOR 125V DC VITAL DIST PANEL D
5-1213-95	UIC	011296	031896	E08		FUSE IDENTIFICATION FOR 125V DC VITAL DIST PANEL D
5-0010-96	UIC	011596	011596	E08		ESAS LOGIC DRAWING UPDATE
5-0050-96	UIC	011796	011796	E08		CABLE DESCRIPTION REPORT B62 ADDITION
5-1059-95	CLO	011996	011996	E08		RESOLVE PENDING APPROVAL CABLE CODES IN CABLE RACE
5-0069-96	UIC	012696	012696	E08		CORRECTION TO MILLSTONE CABLE RACEWAY CODE C85
5-0056-96	UIC	012996	013096	E08		RCP SPEED SENSING PAID UPDATE
5-0055-96	CLO	020996	021296	E08		REVISE EMERGENCY DIESEL GENERATOR LOGIC DIAGRAM
5-0099-96	UIC	021496	052096	E08		RECORDER 2CESPNL07RR MICROPROCESSOR CONFIGURATION
5-0119-96	UIC	021596	052096	E08		CPF RADIATION MONITOR RECORDER REPLACEMENT WIRING
5-1218-95	UIC	021996	031896	E08		FUSE IDENTIFICATION FOR 125V DC NONVITAL DISTRIBUT

CRITERIA: ALL DCS FOR UNIT DWG FOR DISCIPLINE M AS OF 05/29/96

NUMBER	STATUS	APPROVAL DATE	CLOSE DATE	DISCIPLINE CATEGORY	PDCR #	DESCRI
	CLO	051095	063095	M08	2-94-072	REROUTE TUBING LINES TO RELOC WASTE GAS SAMPLE SINK
	CLO	080295	080495	M08	NA	REMOVAL OF DIESEL GENERATOR DWGS FROM ISI PROGRAM
1071-95	CLO	080995	081095	M08		LINE SYMBOLOLOGY UPDATE, P.A.S.S.
0996-95	CLO	080795	081195	M08	2-94-047	UPDATE SERVICE WATER CHANGES
1043-95	CLO	081095	081195	M08	2-95-034	SERVICE WATER P&ID UPDATE
0968-95	UTC	081595	100695	M08	2-93-043	LOCAL STORAGE OF 5" FIRE HOSE CROSSTIE TO SERV WTR
1082-95	UTC	082295	082295	M08		VALVES 2-HD-11/B & 2-HD-112C ISO DWG UPDATE
1083-95	CLO	082995	091995	M08		P&ID 25203-26005 SH 3 UPDATE
1035-95	UTC	083095	121995	M08		P&ID UPDATE FOR 26023 SH. 1 SFP COOLING & CLEANUP
1053-95	UTC	083195	112195	M08	NA	AUX BLDG AREA DRAINS & HP DECON ROOM WASTE EFFLU
1113-95	UTC	090895	090895	M08		HEATER DRAINS LEVEL CONTROLS VALVE CORRECTIONS
1065-95	CLO	091195	091295	M08	NA	P&ID DRAWING UPDATE
1084-95	UTC	091395	091395	M08		CONDENSER MISLABELING/EQUALIZER LINE CHANGE
1104-95	CLO	091495	091495	M08	2-92-067	NOZZLE CHANGE
1099-95	UTC	091595	091895	M08		MATERIAL UPGRADE FOR SUPPORT
1112-95	CLO	091995	092095	M08		REPLACE COIL DRAWINGS FOR X-181A & B-UPDATE
1122-95	UTC	092095	092195	M08		DWG UPDATE FOR AERATED WASTE DEMIN. INLET 2 1/2
1133-95	CLO	092195	092295	M08	NA	P&ID DRAWING UPDATE
1167-95	CLO	100395	100495	M08		CHANGE REDUCER ORIENTATION ON DISCHARGE OF P-94A,B
0962-94	CLO	091495	092795	M08		P&ID UPDATE - CLEAN LIQUID RADWASTE SYSTEM
0022-95	CLO	092195	100295	M08		P&ID UPDATE - AUXILIARY BUILDING DRAINS
1169-95	UTC	101095		M08	2-89-100	SEISMIC MOUNTING OF CO2 FIRE EXTINGUISHERS
1193-95	CLO	101295	101895	M08		P&ID 25203-26007 SH. 1 & 2 UPDATE
1155-95	UTC	101095	101895	M08		DRAWING UPDATE FOR RBCCW SYSTEM
0114-94	CLO	092595	101895	M08		P&ID UPDATE-RBCCW SYSTEM
1206-95	SUP	101795		M08		CIRCUIT BOARD T52C DESSICANT DRYER
0708-95	UTC	101895	101995	M08		REPLACEMENT OF FAN F-114A F-114B F-114C
1184-95	UTC	101895	102395	M08		P&ID UPDATE FOR STATION AIR SYSTEM "JDD-28" ENCLOS
1210-95	CLO	102495	103095	M08		CHANGE LINE CONNECTION LOCATION
1135-95	CLO	102195	102195	M08		P&ID UPDATE 26023 SH 2 26034 SH 3
1165-95	UTC	103195	103195	M08		REPLACEMENT INSTRUMENT AIR CTMT ISOLATION VALVE 2-
1248-95	CLO	103095	110395	M08		REMOVE DUPLICATION OF NITROGEN LINE ON SI SYSTEM P
1237-95	CLO	103095	110395	M08		CHANGE DUPLICATE STATION AIR VALVE NUMBER
081	CLO	102495	103195	M08		P&ID UPDATE BORIC ACID AND CHARGING SYSTEM
	CLO	102395	110695	M08		P&ID 25203-26008 SH 3 25203-26027 SH 2 UPDATE
	CLO	102495	110795	M08		P&ID UPDATE-REACTOR COOLANT SYSTEM
1263-95	CLO	111695	111695	M08	NA	CHANGE CHARGING PUMPS SEAL LUBE DRAIN VALVE FROM O
1266-95	CLO	111795	112095	M08		CONDENSATE PUMPS P-2A, 2B & 2C MOTOR WINDING RTD'S
1272-95	UTC	112095	112195	M08		2-HV-450 VALVE NUMBER DUPLICATION
0209-94	CLO	112895	113095	M08		P&ID UPDATE SAMPLE SYSTEM
1312-95	UTC	113095	120895	M08		A B TURBINE INSTRUMENTS SWITCHED ON P&ID
1284-95	UTC	120595	120595	M08		P&ID 25203-26005 SH 1 UPDATE REMOVAL OF STRAINERS
1194-95	UTC	101695	120695	M08		P&ID 26026 SHEET UPDATE FOR VALVE 2-BW-139
1302-95	UTC	120695	120695	M08		P&ID UPDATE FOR 26026 SHEET 3 AUX STEAM & CONDENSA
0618-95	CLO	120895	120895	M08		P&ID LEGEND UPDATE
1279-95	CLO	120795	120795	M08		CHANGE AUX. STEAM TRAP NUMBER (DUPLICATE OF MAIN ST,
1268-95	UTC	122195	122195	M08		NEW DWGS TO SHOW FLOOR DRAIN LABELLING SYSTEM
1332-95	CLO	122195	021296	M08		2-SW-247 PNEUMATIC POSITIONER GAUGE MODIFICATION
1325-95	UTC	122195		M08		DRAWING UPDATE
1327-95	CLO	121895	122895	M08		CORRECT INSTRUMENT AIR DRYER PANEL INSTRUMENTS
1276-95	UTC	122195	122195	M08		P&ID UPDATE FOR FIRE PROTECTION SYSTEM 26011 SH 1
1258-95	UTC	122795	122795	M08		2-GAN-353 2-LRA-160 VALVE DUPLICATION
1247-95	CLO	122995	122995	M08		ADDITION OF STATOR WINDING COOLING VALVES IN RECTI
0034-96	UTC	011296		M08	2-93-043	UPDATE P&ID 25203-26011 SH 2

CRITERIA: ALL DCNS FOR UNIT DM2 FOR DISCIPLINE E AS OF 05/29/96

NUMBER	STATUS	APPROVAL DATE	CLOSE DATE	DISCIPLINE CATEGORY	PDCR #	DESCRI
	UIC	021996	031896	E08		FUSE IDENTIFICATION FOR 125V DC NONVITAL DISTRIBUT
	UIC	022396	031896	E08		FUSE IDENTIFICATION FOR 125V DC NONVITAL DISTRIBUT
0828-95	UIC	022396	031896	E08		FUSE IDENTIFICATION FOR 125V DC NONVITAL DISTRIBUT
0155-96	UIC	022496	022896	E08		STATION BATTERY CELLS 201A DB1 & 201B DB2
0143-96	UIC	030196		E08	2-96504A	CEDS REED SWITCH POSITION X-MTRK RSPTS REPLACEMENT
0191-96	UIC	030596	032296	E08		DATA TRAX INSTALLATION CHEM LAB MICROPROCESSOR CON
0204-96	UIC	030996		E08	NA	REPLACEMENT OF SOLENOID VALVE 2-LRR-103.LBS
0207-96	UIC	031496		E08	2-95-066	OMP F22AC,BC & C508, C509 SPEC. 329 UPDATE
0198-96	UIC	032596		E08		ERC POWER SUPPLY CAPACITOR REPLACEMENT
0313-96	UIC	040196		E08		ERC 30V/60HZ REGULATED POWER SUPPLY
0190-96	UIC	040296		E08	2-93-034	CST SUMP PUMP LOCATION
0194-96	UIC	040496		E08		REPLACEMENT OF PRESSURE TRANSMITTERS PT-6526 PT-65
0282-96	UIC	040496		E08		REPLACEMENT OF PRESSURE TRANSMITTER PT-4300
0304-96	UIC	041096	041096	E08		IDENTIFY POWER TO HYDROGEN ANALYZER A & B ON LOOP
0299-96	UIC	041296		E08	2-91-003	CONTROL ROOM HVAC RADIATION MONITOR MODIFICATION
0300-96	UIC	041896	041896	E08		Z1 Z2 BATTERY ROOM AIR TEMP MONITORING TE-8435A TE
0330-96	UIC	042496	042496	E08	2-91-003	CONTROL ROOM HVAC RAD MONITOR CABLE CONNECTORS
0340-96	UIC	042696	042696	E08		MICELLANEOUS DRAWING UPDATES
0322-96	UIC	042996		E08		SPEC SP-EE-329 UPDATE & PMMS UPDATE
0351-96	UIC	042996		E08		SPEC SP-EE-329 UPDATE
0361-96	UIC	043096	051796	E08		RWST PIPE CHASE SUMP PUMP P126 REPLACEMENT
0393-96	UIC	043096	050196	E08		TOTAL LOAD CALCULATION FOR 125VDC DISTRIBUTION PAN
0442-96	UIC	051096		E08		REPLACEMENT OF TRAVELING SCREEN DRIVE MOTOR HANDSW
0444-96	UIC	051796	051796	E08		RWST PIPE CHASE SUMP PUMP P126 REPLACEMENT
0424-96	UIC	051696		E08		RECORDER UR-5265 MICROPROCESSOR CONFIGURATION
0446-96	UIC	051796	052096	E08		RECORDER 2CESPNL07RR MICROPROCESSOR RECONFIGURATIO
0445-96	UIC	052096	052096	E08		CPF RAD MONITOR RECORDER REPLACEMENT WIRING CLARIF
	UIC	052096		E08		RECORDER UR-5265 REPLACEMENT

CRITERIA: ALL DCNS FOR UNIT DM2 FOR DISCIPLINE M AS OF 05/29/96

NUMBER	STATUS	APPROVAL DATE	CLOSE DATE	DISCIPLINE CATEGORY	DCNR #	DESCRI
	JIC	011596	011696	M08		P&ID DRAWING UPDATE FOR M. S. GENERATOR BLOWDOWN--
	UIC	011296	011296	M08		SG BLOWDOWN QUENCH TANK RELIEF VALVE PSV-4634 NUSC
080-95	CLO	010996	011696	M08		LABEL 2CNA-P1A AND 2CNA-P1B ON P&ID
022-96	UIC	011896		M08		REPLACEMENT OF VALVES 2-SW-111 2-SW-113
012-96	UIC	011896	012296	M08		ADD PI TO P-170 UPDATE WASTE NEUTRAL RADIATION MON
046-96	UIC	012596	012596	M08		FAN F-31A F-31B MOTOR SIZE UPDATE
041-96	UIC	012596		M08	2-95-068	ELECTRICAL PENETRATION ADDITION CABLE VAULT FLOOR
031-96	CLO	012296	013096	M08		ADDITION OF PI NUMBERS TO CHILLERS X-196A X-196B
060-96	UIC	012996		M08	2-95-054	RETIREMENT OF REAST & BAE P&ID
110-95	UIC	020296		M08		AS BUILDING OF SUCTION PIPING FROM DEGASIFIER H-24
073-96	UIC	020296		M08	2-95-068	ADDITION OF ASTM B-564 COPPER ALLOY UNS C83600 TO
067-96	UIC	020596		M08	2-95-064	SUPPLEMENT TO DCNS 1196-95 & 1229-95
088-96	UIC	021396	021596	M08		BACKUP AIR ACCUMULATOR FOR RBCCW VALVE 2-RB-13.1A
321-95	UIC	020996		M08		HEATER DRAINS PUMP SEAL COOLING TO X-204A X-204B
030-96	UIC	020996	021396	M08	NA	UPDATE OF GLAND SEAL COOLING, X-204A & B
080-96	UIC	021396		M08	2-95-064	BACKUP AIR ACCUMULATOR FOR RBCCW VALVES 2-RB-13.1B
115-96	CLO	021596	021696	M08		UPDATE VALVES ON TRAVELING SCREENWASH P&ID
071-96	UIC	020896	020896	M08		P&ID UPDATE FOR 26012 26203
116-96	CLO	021496	021696	M08		UPDATE P&ID 26008 SHT'S 2 & 4 (REF ACR NO. 8751)
018-96	CLO	021396	021496	M08		P&ID 25203-26008 SH 3 UPDATE
079-96	UIC	021696	021696	M08		P&ID UPDATE FOR 25213-26801 SH 7
094-96	UIC	022596	022796	M08		UPDATING ISOLATION VALVES FOR LG-7003/7012
181-96	CLO	030496	030796	M08		CORRECTION OF LINE CLASS ON DRAIN LINE, CCA-11, HSC-
186-96	CLO	030796	032196	M08	2-96501D	SUPPLEMENT TO DCN NO. DM2-S-0158-96 TIE-IN VALVES
228-96	CLO	031396	031896	M08		UPDATE AUXILIARY CHEMICAL FEED PANEL C-98A
122-96	CLO	031496	031896	M08		REMOVING INDICATORS ZI-4218 ZI-4222 MAIN STEAM SYS
195-96	UIC	031896		M08	2-95-066	ADD PRESSURE SWITCHES PS9968A & PS9968B
178-96	SUP	031896	041796	M08	2-96018A	PIPE CLASS "JCD" & P&ID FOR SERVICE WATER STRAINER
235-96	CLO	032096	042596	M08		SERVICE WATER P&ID UPDATE
261-96	CLO	032296	032696	M08	NA	CORRECT VALVE NUMBER ON DIESEL GENERATOR LUBE OIL
242-96	CLO	032296	032696	M08	2-95-064	SUPPLEMENT TO DCNS 1196-95 & 1229-95
087-96	UIC	032896		M08		UPDATING P&ID LEGEND
223-96	UIC	033196		M08		STEAM AIR EJECTOR EXHAUST FAN ASSEMBLIES F55A F55B
102-	UIC	040296	050796	M08		DRAWING UPDATE CONTAINMENT SAFETY INJECTION PIPING
	IC	040596	042596	M08		2-SW-12A,B,C & D VALVE ACTUATOR DETAILS
	LO	040996	041996	M08		P&ID 25203-26022 SH. 5 UPDATE
007-96	SUP	041796	042396	M08		SERVICE WATER PRESSURE INDICATOR REPLACEMENT MOD
031-95	CLO	041896	042496	M08		P&ID DRAWING UPDATE FOR STATION AIR-26009-00010
005-96	UIC	041896		M08		NUSCO NUMBERS REQUIRED ON DRAIN VALVES FOR LS-5393
027-96	UIC	042396	050396	M08		SERVICE WATER PRESSURE INDICATOR REPLACEMENT MODIF
058-95	UIC	042596		M08		MOD. TO END CAPS FOR 2-RB-76A & 2-RB-76C
058-96	UIC	042596		M08		ADDITION OF PORTABLE DEMINERALIZERS TO WET LAYUP
025-96	UIC	042696		M08	2-95-066	P&ID 25203-26027-00003 UPDATE
059-96	UIC	042996	051796	M08		OFF-GAS SUMP PUMP P-126, DISCHARGE MODIFICATION
074-96	UIC	020996		M08		ISI DRAWING UPDATE
089-96	UIC	051596		M08		UPDATE FOR P&ID 25203-26005 SH1
10-96	UIC	051496		M08	2-95-053	PIPING SPECIFICATION
05-96	UIC	051696		M08	2-95-068	ADDITION OF PIPING CONNECTION TO P&ID 25203-26009

CRITERIA: ALL DONS FOR UNIT DM2 FOR DISCIPLINE C AS OF 05/29/96

MEMBER	STATUS	APPROVAL DATE	CLOSE DATE	DISCIPLINE CATEGORY	PDCR #	DESCRI
	LO	080495	080495	C08	NA	DRAWING UPDATE FOR SERVICE WATER SUPPORTS
	UIC	020996		C08		REPLACEMENT RECORDER FOR CPF AREA RADIATION MONITO
1096-96	UIC	021396		C08		TEMPORARY RIGGING FROM SUPPORT 401102
1285-96	UIC	040496		C08		INSTALLATION OF MISC COMPONENT SUPPORT STRUCTURES
1222-96	UIC	041196		C08		INSTALLATION OF MISC COMPONENTN SUPPORT STRUCTURES
1173-96	UIC	050396		C08		ISI DRAWING UPDATE
1130-96	UIC	050396		C08		ISI DRAWING UPDATE
1133-96	UIC	050396		C08		ISI DRAWING UPDATE
1125-96	UIC	050396		C08		ISI DRAWING UPDATE
1144-96	UIC	050396		C08		ISI DRAWING UPDATE
1161-96	UIC	050396		C08		ISI DRAWING UPDATE
1203-96	UIC	050396		C08		ISI DRAWING UPDATE
1260-96	UIC	050396		C08		ISI DRAWING UPDATE
1350-96	UIC	050396		C08		ISI DRAWING UPDATE
1360-96	UIC	050396		C08		ISI DRAWING UPDATE
1249-96	UIC	050396		C08		ISI DRAWING UPDATE
1229-96	UIC	050396		C08		ISI DRAWING UPDATE
1231-96	UIC	050396		C01		ISI DRAWING UPDATE
1237-96	UIC	050396		C08		ISI DRAWING UPDATE
1239-96	UIC	050396		C08		ISI DRAWING UPDATE
1213-96	UIC	050396		C08		ISI DRAWING UPDATE
1224-96	UIC	050396		C08		ISI DRAWING UPDATE
1176-96	UIC	050396		C08		ISI DRAWING UPDATE
1188-96	UIC	050396		C08		ISI DRAWING UPDATE
1183-96	UIC	050396		C08		ISI DRAWING UPDATE
1180-96	UIC	051396		C08		REPLACEMENT HOIST BLOCK FOR SPENT FUEL POOL PLATFO
1268-96	UIC	051696		C08		ISI DRAWING UPDATE
1111-96	UIC	051696		C08		RISER HANGER ELEVATION 0'-1 1/2" ON LINE 2 1/2"-HSD
1104-96	UIC	050996		C08		REPLACEMENT OF PIPE SUPPORT COMPONENTS FOR 3/4"-CC
1125-96	UIC	052096		C08		ISI DRAWING UPDATE

NORTHEAST UTILITIES

ROOT CAUSE INVESTIGATION

REVISION 1

MILLSTONE UNIT THREE LOSS OF CONFIDENCE IN THE MP-3 CONFIGURATION AND
CURRENT LICENSING BASIS

ACR 13302

Lead Evaluator:

Mark A. Whitney July 1, 1996
Mark A. Whitney Date

TEAM MEMBERS:

Kenneth L. Burlon
Kenneth L. Burlon Date
July 1, 1996

George R. Pitman 2/11/96
George R. Pitman Date

ROOT CAUSE ANALYSIS: LOSS OF CONFIDENCE IN THE UNIT'S CONFIGURATION TO ITS CURRENT LICENSING BASIS

EXECUTIVE SUMMARY

An assessment team was convened on April 29, 1996 to review the design and license basis compliance of MP-3, as described in Configuration Management Program Instruction (PI) 2. The team was charged with determining whether or not the program specified in the MP3-specific Configuration Management Plan (CMP) is adequate; what, if any, expansion in review scope ("Slice of System") should occur; and what other areas should be reviewed as part of the CMP. This activity was completed on June 4, 1996. A MP-3 PI-2 specific assessment was forwarded to management on June 5, 1996. That report covered documentation dating back about two and a half years. The documentation included PIRs (Plant Information Reports) and ACRs (Adverse Condition Reports), NSAB (Nuclear Safety Assessment Branch) and SNRB (Site Nuclear Review Board) meeting minutes; INPO (Institute of Nuclear Power Operations) evaluations; personnel interview inputs; QAS reports and assessments; and the recent NRC Inspection Team findings. It also addresses issues raised in ACR 7007, when categorizing the above information reviewed for MP-3.

Revision 1 to the assessment was issued on June 21, 1996, based on comments received while drafting the original issue of the report. The latest revision maintains the original review scope in an Access database. It adds Plant Incident Report (PIR) data from January 1, 1986 through December 31, 1993. The additional data indicated certain problems existed at startup, focusing mainly on Equipment Environmental Qualification (EEQ); Emergency Diesel Generator (EDG); and Service Water related mussel fouling and SLCRS events. These problems appear to have been largely corrected as the unit matured.

The review conducted of earlier PIR data indicated continuing themes since startup of Automated Work Order (AWO) use and control issues; MOV problems; Auxiliary Feed Water (AFW) issues; Plant Design Change Record (PDCR)- related issues; Bypass Jumper (BJ) use and control; Main Steam Isolation Valve (MSIV) stroke problems; Supplemental Leak Control and Recovery System (SLCRS) issues; EDG issues; and electrical cable related issues.

The Team also performed a causal factor evaluation on the "event". The event, which is defined as **Loss of Confidence in the MP-3 Configuration and Current Licensing Basis**, is essentially, a human performance failure event of large proportion. The Team concludes that:

- o The event unfolded over a long time frame, starting shortly after commercial operation in 1986
- o The major non-unit-specific issues of ACR 7007 apply to MP-3, and
- o The primary causal factor for this event appears to be the unit's failure to treat the FSAR as a document with which verbatim compliance was required. No definite root cause could be found.

Corrective actions fall into two distinct and separate categories, as follows:

- 1) The re-establishment of confidence in the physical plant to ensure compliance with design and license basis commitments and conditions and,
- 2) The creation of changes in the areas of management expectations, oversight, culture, administrative processes and procedures, personnel training scope and effectiveness (including management development) and the implementation of an effective corrective action program. These are the same areas deemed to require improvement by the ACR 7007 ERT Report.

The ERT for this root cause analysis has endorsed, with conditions, the corrective actions ongoing for item 1 above, via issuance of the MP3 Unit-Specific Assessment Report. Additionally, relative to item 2 above, ongoing or planned Nuclear Excellence Plan activities should prevent the recurrence of a similar condition.

(Note that since there was no one discrete "event" to analyze, this causal analysis is by nature not as objective as a distinct event-driven Root Cause analysis.)

1.0 INTRODUCTION

1.1 Event Description

On January 31, 1996, the three units at Millstone Station were placed on the NRC "Watch List". At that time Millstone Unit Three (MP-3) was operating at 100% reactor power. On March 30, 1996, MP-3 elected to shut down to address AFW system issues. The NRC issued NU a letter on April 4, 1996, requesting that NU provide it additional information 7 days prior to restarting the unit. NU established a Configuration Management Program (CMP) to ensure confidence that the unit was complying with its design and license bases in response to the NRC's 10CFR50.54(f) issue letter.

1.2 Scope

This document provides an assessment of the causal factors leading up to why a Loss of Confidence in the MP-3 Configuration and Current Licensing Basis has occurred. It addresses the implications of ACR 7007 findings on MP-3. It ensures the scope of PI-2 is appropriate and addresses key license and design basis issues, and is based on Revisions 0 and 01 of the MP-3 NUC PI-2 Assessment reports.

A team was appointed to review and modify, as required, the scope of NU's PI-2, "Unit Specific Assessments". The team consisted of George Pitman (lead); Ken Burton and Mark Whitney, and was charged with the implementation of NUC PI-2 to ensure that the MP3-specific CMP scope adequately addresses MP-3 design and licensing basis compliance issues. PI-2 specifies that a review of data be conducted covering a period of a minimum of two years. The Team initially reviewed reference data covering a period of approximately two and one half years, from January 1, 1994, through mid May 1996. The subject data reviewed is shown in Section 2.0 of this report. The Team interviewed 24 people, many still with the unit and with MP-3 experience predating unit startup. Interview findings confirmed many of the issues described in the Causal Factor chart attached to this report. Based on this review, the Team issued Rev. 0 of its findings in a report dated June 4, 1996. | 1

The Team then augmented the assessment scope with a review of PIRs from 1/1/1986 through 12/31/1993 to verify whether or not the themes noted in Rev. 0 of the report continued to recur, or if other themes would be identified. The Team concluded that, with the exception of some issues identified as related to initial unit startup and configuration control, the conclusions and recommendations of Reference 2.1 are still valid with only minor scope additions. | 1

2.0 REFERENCES

- 2.1 MP-3 PI-2 :MP-3 Specific Assessment: Report to MP-3 UPM and MQC on PI-2 Team Findings, Rev. 0, dated June 4, 1996
- 2.2 Applicable Adverse Condition Reports (ACRs): 1/1/95-5/15/96
- 2.3 Applicable Plant Incident Reports (PIRs): 1/1/86-12/31/94
- 2.4 MP-3 NRB Meeting Minutes: January 1, 1993-December 31, 1993
- 2.5 Site Nuclear Review Board (SNRB)/NSAB Mtg. Minutes: January 1, 1994-March, 1996
- 2.6 Relevant QAS reports, QAS Surveillances, etc.
- 2.7 Relevant ISEG reports and evaluations
- 2.8 The last two INPO assessments for Millstone and corporate NU
- 2.9 NU internal self assessments
- 2.10 ACR 7007 Event Review Team Report, February 22, 1996

3.0 PERSONNEL INVOLVED

3.1 MP-3 PI-2 Team Members:

George Pitman (Lead)
Ken Burton (HPES trained Team Member)
Mark Whitney (HPES trained Team Member)

3.2 Personnel Interviewed for PI-2 Specific Assessment Report (Ref. 2.1):

D.F. Asay -- Current MP3 I&C Engineer
C. J. Ashton -- Current MP3 Mechanical Engineering Design Engineering Supervisor
R.A. Andren -- Current MP3 Manager, Design Engineering
R.L. Broullier -- Current MP3 HVAC/Support Systems System Engineer
M.B. Brown -- Original MP3 I&C Supervisor and Current Millstone Oversight Director
D.E. Deane -- Current MP3 Electrical Design Supervisor
R.E. Deconto -- Current MP3 Mechanical Design Engineer
M.T. Dolishny -- Current MP3 I&C Supervisor
D. C. Gerber -- Former MP3 Mech/Civil Des. Sup. and Current Mgr., Tech. Support
J.S. Harris -- Original Unit Engineering Manager
S.V. Heard -- Former MP3 Procedure Writer
M.D. Hess -- Former MP3 Unit Engineering Supervisor and Current AFW System Engr.
S.L. Lawhead -- Current MP3 Shift Manager
L.E. Loomis -- Current MP3 ISI Engineer
T. J. Mawson -- Current MP3 NSSS Systems Supervisor
D. J. McDaniel -- Former MP3 Unit Engineering Manager and Current Rx. Engr. Supv.
J.C. O'Brien -- Current MP3 Generation Test Supervisor
J.E. Petrocky -- Current MP3 Mechanical Engineer
P.F. Privizzini -- Current MP3 Electrical Maintenance Supervisor
R.B. Roy -- Current MP3 Maintenance Manager
J.A. Ruttar -- Current MP3 Shift Manager
A.J. Silvia -- Current NUSCo Welding Engineering
R.W. Standish -- Current MP3 Mechanical/Civil Design Supervisor
G.L. Swider -- Current MP3 Service Water System Engineer

4.0 COMPILATION OF FACTS AND INFORMATION

4.1 Sequence of Events

- Unit FSAR submitted to NRC October, 1982
- NRC issues SER November, 1985
- Unit Commercial Operation April, 1986
- Service Water Mussel Fouling Shutdown July, 1991
- Major SLCRS Outage: Design Basis not met October, 1992
- INPO evaluation: MP-3 Noncompliance with the unit FSAR March, 1995
- MP-1 receives 10CFR50.54(f) Letter December 13, 1995
- All Millstone Units placed on NRC Watch List January 31, 1996
- ACR 7007 written re: MP-1 February 22, 1996
- MP-3 receives 10CFR50.54(f) letter March 7, 1996
- MP-3 shuts down due to AFW issues March 30, 1996
- MP-3 to furnish additional information to NRC prior to restart April 4, 1996
- MP-3 PI-2 Team starts assessing PI-2 scope April 30, 1996
- Rev. 0 of MP-3 PI-2 Team Report issued June 4, 1996
- Rev. 01 of MP-3 PI-2 Team Report issued June 21, 1996

4.2 Trends Identified in Data Review

The information below was determined by a review of Section 2.0 documentation as presented by Reference 2.1. It was coded per ACR 7007 causal factors, as shown in References 2.1 and 2.2. Causal factor coding, as described in Reference 2.1, Attachment B, was used to link a document to a particular program, component, document, procedural inadequacy or lack of procedural compliance issue. Some of the more prominent main issues are addressed below. Others can be found in the Reference 2.1 and/or 2.2 sheets entitled "Matrix Observations and Printout".

- 4.2.1 **DCNs** not processed properly, violated, etc.
- 4.2.2 **NCRs** not processed properly
- 4.2.3 **AWO issues:** Worked w/o authorization, contained wrong information, wrong type used, tagging issues
- 4.2.4 **MOV's:** DCN related issues; BJs; wiring, EEQ issues
- 4.2.5 **Testing:** Not done IAW IST program/procedure deficiencies; not performed or not done per FSAR requirements
- 4.2.6 **FSAR issues:** FSAR not kept current; operations and or testing not IAW FSAR; system descriptions inconsistent with FSAR, FSAR conflicts with Tech Specs
- 4.2.7 **MEPL issues:** Incorrect classifications, improper downgrades
- 4.2.8 **AFW system issues:** Pipe supports, calculations, operability issues
- 4.2.9 **Improperly Landed Leads:** field and/or drawing, work practice errors
- 4.2.10 **CCP system issues:** Loose parts, mussel fouling, valve stroke time
- 4.2.11 **Surveillance issues:** Failed, late or calculation errors
- 4.2.12 **Drawings:** Errors; discrepancies; and BJs not on dwng.
- 4.2.13 **PDCRs:** Close out errors; discrepancies; incomplete/inadequate PDCRs
- 4.2.14 **BJs:** Removed without authorization; on dwng, not installed in field; compromise unit design features; not restored per proc.; proc. used with BJ missing/ inadequate
- 4.2.15 **MSIVs:** Stroke times, failures to open
- 4.2.16 **Mussel issues:** Component fouling various critical Hxs
- 4.2.17 **RCP issues:** Oil leakage; oil collection system problems; PDCR errors
- 4.2.18 **SLCRS:** Boundary breaches, failed surveillances, engineering deficiencies
- 4.2.19 **EEQ:** Incomplete packages; temperature limits exceeded; component qual. issues
- 4.2.20 **EDG:** Drawing issues; excessive start times; air receiver operation issues
- 4.2.21 **Programmatic issues:** Not implemented consistently; retests inadequate; seismic issues
- 4.2.22 **Cable issues:** Separation criteria violated; overloaded trays; breaks

4.3 Interviewee Observations and Opinions

A total of 24 people were interviewed as part of Reference 2.1's process. Interviewees spanned the experience time frame of early 1980's to present with the unit, to only 2 or 3 years' experience with the unit. A majority of the interviewees were long term employees associated with the unit over a decade, who had risen from worker to supervisory ranks. The opinions they shared with the Team, summarized below and shown as Attachment 1 to this causal analysis, relate only to configuration and licensing basis issues. Other observations which interviewees provided are shown in Reference 2.1, Attachment E. Overall, interviewee observations largely validated findings obtained from documentation reviews in References 2.1 and 2.2 and were important to identifying the primary causal factor listed on page 1 of this analysis.

Interviewee comments centered around the following major themes:

- Inability to clearly track commitments made after unit startup
- Conflicting and/or overlapping roles and responsibilities for the corporate and site Engineering organizations, and inadequate actions to capture post startup issues and calculations in one central data base or repository
- Lack of clear management expectations on the role of maintaining and using the unit FSAR

- Inadequate engineering resources provided to ensure the FSAR and field as built conditions matched
- Lack of clear management expectations in operating systems in accordance with FSAR descriptions. This was evidenced by operator "work arounds" and discrepancies between operating procedures, Tech Specs, and the FSAR
- Systems which had known problems; did not operate as designed; and which were not fixed post startup (SLCRS, AFW)
- Contractors brought on site are given narrow direction for work, with little appreciation of their works' impacts on the FSAR and/or unit licensing and design basis
- Level of management scrutiny of FSAR reviews decreased over time, as reviews deleted the use of the engineering supervisor and manager
- Destaffing the Stone and Webster engineering support contingent for economic reasons, contrary to keeping them for a period of post commercial operation. (The Team notes, however, that a Stone and Webster contingent was assigned to augment the NUSCo Engineering MP3 staff to ensure continuity over the startup to early period of operation period.)

1

5.0 CONCLUSIONS

The ERT's conclusions fall into two major areas, as follows:

5.1 **There is a need to re-establish confidence in MP-3's configuration.** The eleven areas identified in Reference 2.1, Section VII, require follow up actions. Detailed recommendations are included with the Assessment and not reiterated here verbatim. A number of these areas are directly factored into the attached events and causal factor chart, and are summarized below:

1

- 5.1.1 Old or numerous BJs may compromise the unit license and design basis
- 5.1.2 PDCEs may not fully address design and documentation requirements
- 5.1.3 QA Calculations may not truly address "Worst Case" scenarios, and basis calculation integrity may be compromised
- 5.1.4 FSAR Correlation to Operating Procedures
- 5.1.5 Original Plant Startup Punch List Items
- 5.1.6 Missed Commitments
- 5.1.7 A/E Interface with Major Supplier Packages
- 5.1.8 FSAR Familiarity and Use
- 5.1.9 FSAR Changes Conducted Without a 10CFR50.59 Evaluation
- 5.1.10 DCN Use Vulnerability
- 5.1.11 Potential inconsistency between the FSAR's body and FSAR Volume 15 and 16, NU responses to the NRC's questions (Q&As)

5.2 There is also a need to ensure that corrective actions for the following areas are effective and will prevent recurrence of a condition such as currently exists at MP3. This is essentially a direct endorsement of the applicability of ACR 7007 ERT findings to MP-3.

1

- 5.2.1 Management expectations
- 5.2.2 The prevailing culture, which permits diversity in the degree of commitment to maintaining regulatory compliance
- 5.2.3 Effective Oversight activities which will, in the early stages, detect the development of less than acceptable performance must be put in place
- 5.2.4 Personnel, including management, need to be more effectively trained in the area of regulatory compliance and the means for maintenance of same.
- 5.2.5 Administrative processes and procedures essential to configuration management
- 5.2.6 An effective corrective actions program
- 5.2.7 An adequately sized staff capable of preventing backlog growth all-the-while conducting work activities in a manner that will ensure retention of design and license bases.

6.0 CORRECTIVE ACTIONS

The MP-3 Unit Director should implement the recommendations of Reference 2.1, Section VII, as well as Recommendation 11 in Section VII of this main report, MP-3 PI-2: MP-3 Specific Assessment: Report to MP-3 UPM and MQC on PI-2 Team Findings, Rev. 01, dated June 21, 1996; and the applicable ACR 7007 recommendations described above. This includes, specifically:

- 6.1 **Open BJs**
 - a. Review all open BJs for FSAR compatibility. Ensure they have a written safety evaluation
 - b. Evaluate temporary mods. installed without a BJ for need of a BJ and FSAR compatibility
- 6.2 **PDCEs may not fully address design and documentation requirements**
 - a. Review 1983-1991 PDCEs as part of other design ongoing reviews
- 6.3 **QA Calculations may not truly address "Worst Case" scenarios, and basis calculation integrity may be compromised**
 - a. Generate a master list of all calculations
 - b. Ensure existing calculation assumptions do not negate each other
- 6.4 **FSAR Correlation to Operating Procedures**
 - a. Review Group II systems for FSAR to Operating Procedure compatibility
 - b. Complete 10CFR50.59 evaluations for ALL systems operated differently from the FSAR-described mode of operation.
- 6.5 **Original Plant Startup Punch List Items**
 - a. Credit planned Engineering Backlog review with ensuring that significant design mods put into place just before and after unit startup are compatible with the FSAR.

- 6.6 **Missed Commitments**
- a. Establish a means to ensure commitments are tracked and traceable
- 6.7 **A/E Interface with Major Supplier Packages**
- a. Ensure reviewers are alert to ensure major A/E and vendor interfaces were addressed and documented correctly
- 6.8 **FSAR Familiarity and Use**
- a. Ensure that the Training element identified in ACR 7007 regarding FSAR use and expectations is appropriately addressed
- 6.9 **FSAR Changes Conducted Without a 10CFR50.59 Evaluation**
- a. Ensure that ALL plant modifications conducted without a PDCR are reviewed to ensure that either a 10CFR50.59 evaluation exists, or a clear and acceptable rationale is in place justifying the lack of need for such an evaluation
- 6.10 **DCN Use Vulnerability**
- a. Ensure that the unit Design organization reviews ALL Category 8 Administrative DCNs to ensure that drawings have not been changed to reflect field conditions, without first ensuring that the field condition is IAW the intended design.
 - b. Stop using Category 8 DCNs for purposes other than "purely administrative changes"
- 6.11 **Potential inconsistency: the FSAR's body and FSAR Volume 15 and 16 Q&As**
- a. Train appropriate sections of the organization to use Volume 15 and 16 Questions and Answers as part of the MP-3 configuration management process
 - b. Evaluate the need for incorporating the results of Volume 15 and 16 Q&As into appropriate FSAR sections
 - c. Review CMP reviews completed to date and ensure such reviews adequately address the results of Volume 15 and 16 Q&As. Revise such reviews if necessary.
- 6.12 **ACR 7007 ERT Findings**
- a. Ensure the generic elements of the NU CMP and the Nuclear Excellence Plan address the issues shown in Section 5.2.1 through 5.2.7 of this root cause analysis.

7.0 **GENERAL COMMENTS**

The unit specific assessment (Reference 2.1) provides additional information that should be useful to returning the unit to conformance with its licensing basis.

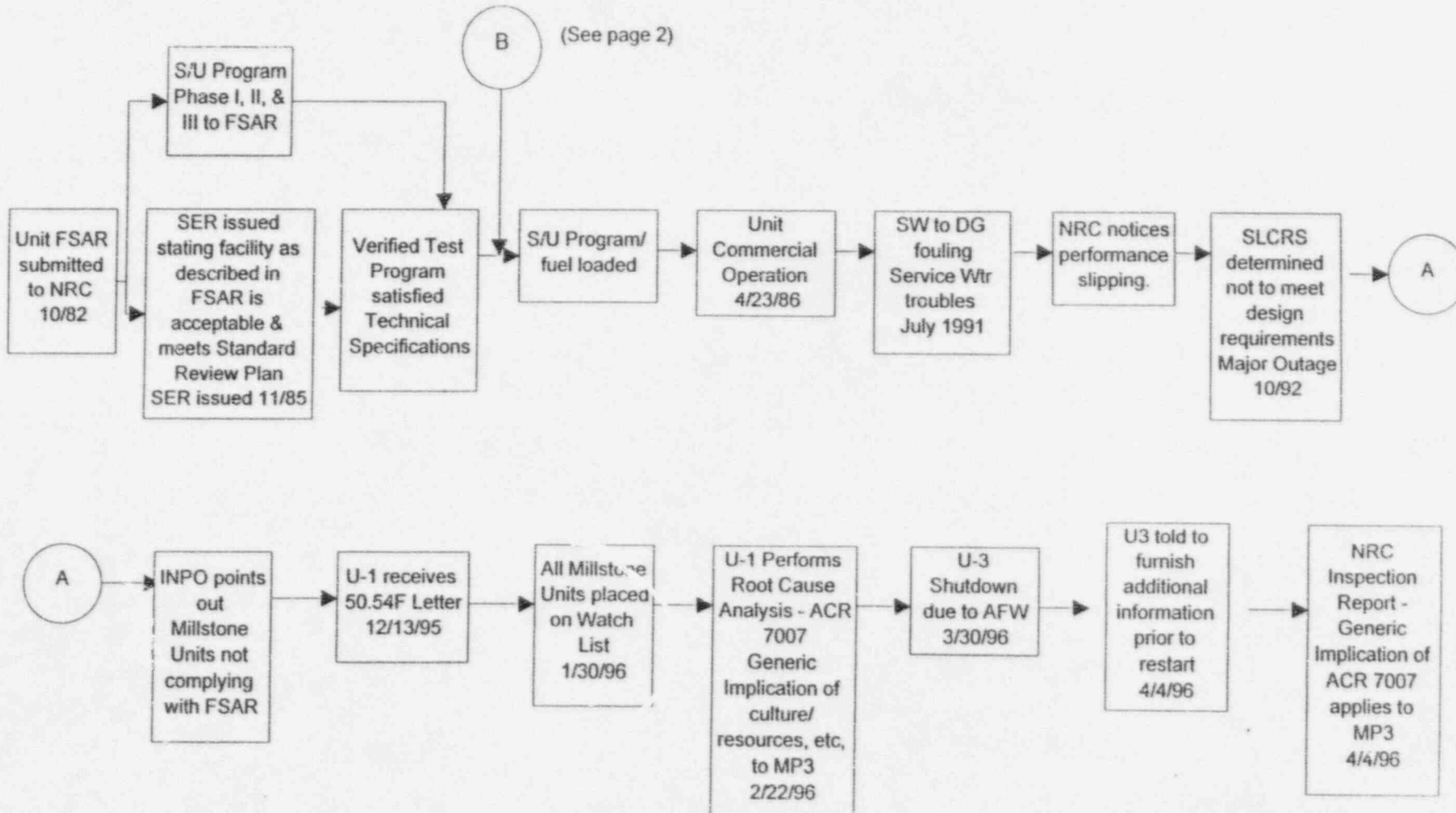
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8.0 **ATTACHMENT**

Attachment 1, Events and Causal Factor Chart

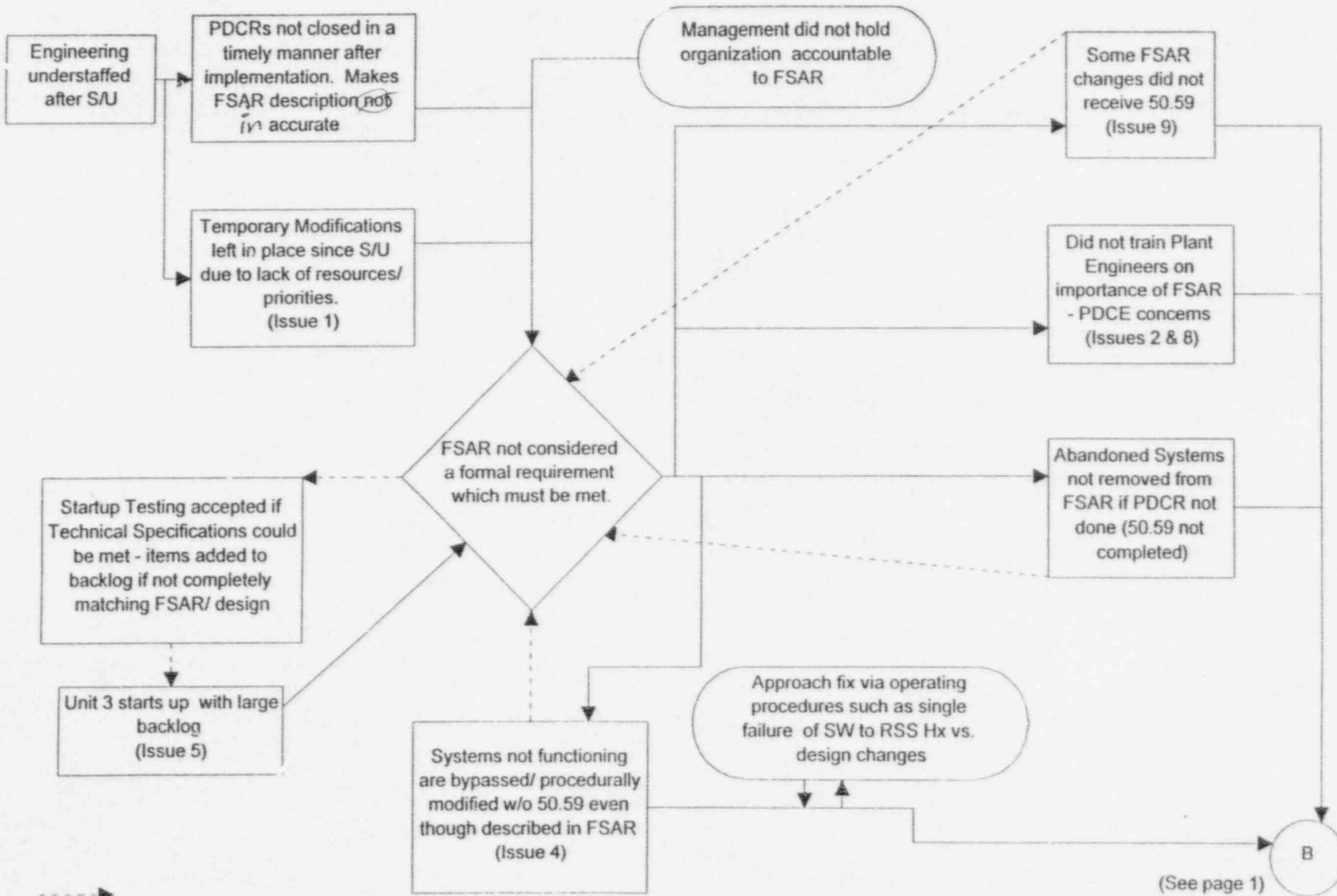
EVENTS & CAUSAL FACTOR CHART

Friday, June 21, 1996



EVALUATION & CAUSAL FACTOR CHART

Friday, June 21, 1996



Dotted lines used to indicate feedback. The result feeds back to strengthen the perception behind the main causal factor.

ATTACHMENT

1A

Attachment 2

Job Priority

(Sheet 1 of 1)

DETERMINE Job Priority by selecting the category description that best matches the task or plant problem.

CATEGORY	PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
Plant or Equipment Reliability	Prevents operation at expected power level or requires immediate action to avoid equipment damage	Equipment problem that jeopardizes continued operation at expected power level	Improves unit performance, availability, and operability. Work may be scheduled and completed in a timely manner	General plant improvement and equipment repairs which can be done when time permits
Personnel Safety	Significant safety hazard requiring immediate action in order to avoid personnel injury	Safety hazard which requires attention to avoid personnel injury	Personnel safety improvements that are needed but do not present an immediate hazard	
Outage Work	Immediate action required to prevent adversely affecting or impeding critical path schedule	A job on the critical path schedule	May become critical path work or significantly affecting outage schedule	Does not affect critical path schedule and may be deferred to later outage without affecting reliability
Regulatory Requirement	Problem that results in failing to meet a regulatory requirement	Jeopardizes compliance with regulatory requirements	Routine work required by regulations	
Preventive Maintenance		Overdue PM which has been determined by Operations or Maintenance supervision to require a higher priority	Routine PM work	Routine PM work
Security Requirement	Requires multiple Security Guard posting and major system failure is imminent or has occurred or Major part of security system has failed creating a degradation of security which cannot be compensated	Requires Security Guard posting and excessive overtime hours will be expended unless addressed promptly or There are inadequate personnel to compensate for additional failures beyond this event	High priority CM, PM, SV, or modification work or Condition is expected to deteriorate within 1 week to a point where Security Guard posting will be required	Routine CM, PM, or modification work or Deterioration to a situation where posting is required, but is not expected in the near future

Level of Use Information

STOP

THINK

ACT

REVIEW

WC 1
Rev. 2
28 of 138

ATTACHMENT

2