REPORT OF THE TMI-1 RESTART ISSUES TASK FORCE MEMBERS

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I. INTRODUCTION

A. Purpose and Description

On April 15, 1983, the Division of Licensing, NRR and the Division of Project and Resident Programs, Region I, jointly established a Task Force to review the staff's current understanding of the NRC requirements governing the restart of TMI-1, and to verify that the requirements for restart are correctly identified. Specifically, the group would (1) verify that the certification list is complete and correctly interprets the original NRC requirement and (2) to verify that THI-1 has been treated in a manner similar to other operating plants for other NPC requirements (i.e., that there were no requirements applied to operating plants that were not applied to TMI-1, by omission, and that for any given issue, their response to NRC requirements with regard to general scope and schedules appeared acceptable relative to the NRC position applied to other operating plants}.

The seven member group was comprised of the resident inspector, the current NRC project manager and two past TMI-1 project managers, a regional startup and pre-operational specialist, an ELD representative, and the Technical Assistant to the Director, DL. This report presents the results of that review.

Methodology

The detailed methodology used for each review area is presented in the section of the report addressing the specific topic. Generally, for the certification portion of the review, the existing certification list that formed the bases for SECY-82-255 and 82-483 was reviewed against the source documents (i.e., Commission Orders, Partial Initial Decisions, SER's etc). Inspection Reports or SER's were reviewed to determine that the status of the item was correctly represented on the list. For the review of all other issues (e.g., MPA's, Bulletins, etc), the NRC request was compared to the licensee's response, staff SER, inspection report or other basic documents unless otherwise specified in the specific topic section.

Results

The review indicates that 3 new certification items should be added to the staff's listing, 3 certification items should be deleted and 15 should be modified to more correctly interpret the NRC requirement. To assure clarity and completeness, a number of other existing items, primarily in the Management section, should be separated into specific items. The total number of certification items has been re-counted to be 144. (Section II). We consider these changes to be minor changes.

We have also reviewed the items that the licensee had proposed to complete after initial criticality and determined that it appears feasible to complete some of these items prior to initial criticality (See Section II.E). We have also identified and listed all proposed license conditions that we consider to be recessary to fulfill requirements imposed by the Commission Order and ASLB decisions. In addition, we have listed about 40 issues which must be completed prior to restart that were not listed in the certification matrix and identified these as prerequisites for restart in Table 2. Many of these were previously identified on the Regional open items list.

The results of our review in areas not related to the certification process also identified items that must be resolved prior to restart (included in Table 2). These include fire protection, IEB 79-27 actions, reload amendment technical criteria, resolution of technical concerns raised in board notifications or allegations, operator licensing, and other issues. We consider it important to note that the open items we have identified were, in many cases, identified in two or three review areas. For example, IEB 79-27 was determined to be an open item based on the Bulletin review, the Order review, the generic letter review, and the ACRS review. Therefore, we have confidence in our methodology.

Tables 1, 2 and 3 represent a compilation of the results, but the individual sections should be read for completeness. Table 3 is a compilation of Board Suggestions which we do not consider to be requirements but should be brought to the attention of the licensee.

Conclusions

We conclude that the original certification listing, as modified by our report, with the inclusion of the bicense conditions and restart prerequisites that we have identified, are all the NRC requirements up to this date that must be met for restart of TMI-1.

We have also concluded that, in general, based on our review of MPA's and NUREG-0737 items, TMI-1 appears to be above average relative to NRC requirement implementation when compared to other B&W plants.

Recommendations

Subsequent to your management review, we recommend that the findings of this report be brought to the attention of the licensee. After resolution of any open items, we recommend that the new certification/restart list be issued as a staff report, and implemented. We also recommend that the final restart listing be maintained current and managed through restart by dedicated resources. We estimate this task to need about 1/4 PSY between now and August.

II. CERTIFICATION ISSUES

A major function of the task force's effort as stated in the April 15, 1983 memorandum that established the task force, was to verify that the NRC requirements for TMI-1 restart are correctly identified and specifically, that the certification list is (1) complete and (2) correctly interprets the original NRC requirement.

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The term certification as applied to TMI-1 stemmed from the Commission's August 9, 1979 order where the Commission specified among other things that the Board will determine which short term actions are necessary and sufficient to permit the safe restart of TMI-1. The August 9, 1979 order further specifies that the staff shall certify to the Commission that those short term actions have been completed to its satisfaction. Hence, certification items are those short term requirements imposed by the Board or the Commission which require completion by restart.

To comply with this requirement, the staff prepared a list of all short term requirements for certification of completion, in the form of a detailed inspection matrix. This matrix which is maintained by Region I inspectors has been modified periodically as necessary to reflect changes in the completion status of each certification item. The current matrix is dated February 8, 1983 and is included as Appendix A to this report. The terms certification list and certification matrix are used interchangeably in this report.

A. Source Documents

To verify that the certification list was complete and that the entries on the list accurately interpret the original requirement, the task force reviewed all potential source documents of certification items. Source documents reviewed included the following:

- All Commission Orders (approximately 40) issued since July 1979 which applied to TMI-i. Five Commission orders were determined to affect certification. These five are: Commission orders dated July 2, 1979, August 9, 1979, March 6, 1980, March 23, 1981 and March 22, 1983.
- 2. All staff safety evaluation reports issued which evaluated licensee's compliance to the August 9, 1979 Order requirements (as modified by subsequent Commission Orders). Safety evaluation reports reviewed included NUREG-0680 and Supplements 1, 2 and 3; NUREG-0752 and Supplement 1; NUREG-0746 and Supplement 1; FEMA findings dated June 16, 1981: and other NRC staff SER's.
- 3. All partial initial decisions (PID) issued by the ALSB. PIDs reviewed include 1) the Management PID dated August 27, 1981, 2) the Design and Separation PID dated December 14, 1981; 3) the Emergency Planning PID dated December 14, 1981; and 4) the Cheating PID dated July 27, 1982. Additionally, the task force reviewed the staff enforcement plan dated February 1, 1982 which was approved with modifications by the Board on April 5, 1982.
- Appeal Board decisions, ALAB 697 and 698, on Emergency Planning issues.

The above source documents and their relationship to certification requirements is shown in Figure 1. Based on discussions with OELD and staff personnel directly involved with the restart proceeding, the above source documents are the only documents which affect the certification items.

B. Methodology

The task force reviewed the above source documents page by page to identify all items requiring action by the licensee or the staff. If the item was interpreted by the task force as being a Board imposed or Commission imposed requirement, the certification list was checked to see if the item was on the list and properly characterized. If the item was not on the list or not properly characterized then it was added to a certification item changes list discussed in Section C Results. Some items identified, particularly in the PIDs, were commitments discussed by the Board in the body of the PID but completion of the commitment was not specifically imposed by the Board. The Task Force identified the licensee's commitments which were not specified as Board or Commission requirements but were relied on by the Board to arrive at their conclusions. These commitments have been included as either restart or long term requirements as appropriate on the requirement lists in the Tables attached to this report. However, these items are not considered certification items. Commitments of this nature were reviewed with cognizant OELD staff to verify that they should not be certification items.

The certification list was also checked to determine if there were other items listed as certification items which were not Board imposed or Commission imposed short term requirements. When items of this nature were found, they were identified for relocation to the appropriate requirements list.

Additionally, since every certification item is to be documented complete by an inspection report, safety evaluation report, or letter as appropriate per SECY-82-250, the task force reviewed all the above documents which were relied on to close certification items. This review was conducted by examining every inspection report, SER or letter closing out a certification item and verifying that the closeout document satisfied all aspects of the item as documented on the certification list.

C. Results

As a result of the task force's review of the source documents, some recommended changes to the certification item list were identified. These changes are provided in Table 1 and consist of 3 new certification items which should be added to the list, 15 certification item listings needing rewording to properly characterize the requirement, and 3 items which should be deleted from the certification list. Additionally, the task force's review identified several commitments in the various PIDs which are not certification items, but the Board relied on those commitments in their decisions. These items have been added to the Restart Items list, Table 2, or the License Condition list, Table 4, as appropriate.

There are 144 certification items, as counted by the Task Force. The previous count had been 130 certification items. The addition of 14 items is the cumulative result of adding the new items identified by the Task Force, deleting the cheating items that the Task Force considers to be restart prerequisites or license conditions and not certification items, and to ensure completeness, separating certain certification items, primarily management items, into several specific items. We included certain Board-imposed certification items in the count which had not been counted previously because the item duplicated Commission ordered items. A numbered list of certification items, as counted by the Task Force, is contained in Appendix A.

- The certification items which are recommended to be added are discussed below.
 - Item 1), Table , "NUREG-0737, Item I.C.5, 'Procedures for Feedback of Operating Experience to Plant Staff' must be enforced at TMI-1 if restart is permitted". Certification items Order Item 6(b), page 15 of 46 and Management PID item 10(a)-(c), page 28 of 46 of the certification list appear to incorporate this item. However, for completeness, this item should be specifically delineated on the list.
 - Item 2), Table 1, "Staff certify to the Commission whether licensee has startup test program which will provide additional operator training to satisy the issue of whether to treat TMI-1 differently from other operating reactors because of the prolonged shutdown" PID Paragraph 571. Staff SER dated December 21, 1982 provides the staff review of licensee's startup test program.
 - Item 3), Table 1, "Staff certify to the Commission that Dauphin County plan has been revised so that there is no suggestion in the plan that school students will be returned to their homes by bus in the early stages of an accident".
 PID paragraph 1832. This item appears to have beer inadvertently left off the certification list.
- The certification items which are recommended to be deleted from the 'ist are discussed below:

- Items 9-11, Table 1, PID paragraph 2421 (1), (3) and (4). PID paragraph 2421 (1) concerns establishment of a two year probationary period during which licensee's qualification requalification program shall be subjected to an independent audit by an auditor approved by the Director of NRR. PID paragraphs 2431(3) and (4) concern licensee establishment of an internal auditing procedure for licensee's operator training and testing program and licensee development of a procedure for random sampling and review of exam results for evidence of cheating, respectively.

These items, per PID paragraph 2437, are required to be satisfied within the first two years after any restart authorization, and hence do not require certification of completion prior to restart. Therefore, they are recommended for deletion as certification items, but should become license conditions.

There is another item, PID paragraph 2421(2), which concerns establishment of criteria for qualifications of instructors. Although this condition is also listed under PID paragraph 2347 which indicates that these conditions are required to be satisfied within the first two years after any restart authorization, subsequent correspondence has modified this condition. Specifically, in order to resolve a concern with the Commonwealth of Pennsylvania, the licensee, in its brief to the Appeal Board on Management issues dated November 15, 1982 p. 158, agreed to not only establish the criteria before restart but also to provide to NRR an evaluation of instructors against this criteria before restart. Hence, it is the task force's recommendation that the certification item which addresses PID paragraph 2421 (2) be modified as noted in Table 1.

3. Some certification items have been recommended for rewording to more closely reflect the NRC requirement. Most of the wording changes are minor and since an inspector reviews the applicable supporting documentation (i.e., PID and SER references), (See Inspection Methodology following), it does not appear that the item identification on the certification list impacts item completion. However, for clarity, the wording changes identified in Table 1 should be made and additionally, references to the appropriate paragraphs of the Board decisions should be made for all applicable certification items.

One recommended wording change may impact actions required for completion of an item. Item IIQ, page 24 of the certification list which references PID paragraph 1036, concerns control grade automatic initiation of EFW. PID paragraph 1036 alludes to the Category A recommendation of NUREG-0578, item 2.1.7a which was to provide control grade automatic initiation of EFW. However, it appears that the Board relied on the licensee installing safety grade automatic initiation (not including automatic control which is clearly long term and the subject of a license condition)prior to restart. Hence, Item 12 Table 1 recommends rewording this certification item to require safety grade automatic initiation. The task force review of NUREG-0680 and supplements could not identify where the staff evaluated licensee's safety grade automatic initiation design. The inspectors who performed the inspection of licensee's implementation of this modification indicated that the inspection was conducted against safety grade field criteria and the licensee's installation meets that criteria. However, it may be necessary to have NRR review licensee's automatic initiation design.

There is another certification item which requires a safety evaluation report. No specific safety evaluation report was issued on NUREG-0737 Item II.F.1.3, containment high range radiaton monitor which is certification item 2.1.8b page 22 of the certification list. A staff evaluation of this item was conducted and documented in NUREG-0680 Supplement 3, page 41. However, it is unclear whether this item meets all NUREG-0737 criteria, and hence it is recommended that the staff review and issue an SER on this item prior to restart.

Item 23, Table 1, Order Item 8, 2.1.6.a Integrity of Systems Outside Containment which concerns licensee's leakage reduction program, was listed in Appendix A of the certification list although there is a short term item entry in the certification list. All parts of this item were Category A requirements of NUREG-0578 and herce, it is a certification item and should be listed on the certification list. However, some systems can not be checked for leakage until the plant is critical and hence completion of this item was in the staff enforcement plan as a license condition to be completed prior to exceeding 5% power.

During the task force's review of inspection reports to determine if all items were properly completed, one discrepancy was found. Certification item Order Item 2, 79-05B-3, page 8 of the certification list was documented complete by Inspection Report IR 82-15. This item involved resetting of the setpoints for low pressure reactor trip and low pressure ESF actuation. The inspection report documents that the surveillance procedures for testing of low pressure reactor trip and ESF actuation were modified to reflect the revised setpoints, but the inspection report does not document that the setpoints were actually revised. Hence, the task force has recommended that this item be reinspected to ensure the setpoints were properly modified. The task force found no other discrepancies with the inspection reports which documented completion of certification items.

4. Miscellaneous changes to the certification list.

There are some miscellaneous changes to the certification list needed to ensure the list is complete and all items which are not certification items are removed. Although certification item entries are affected, there are no previously unidentified items other than those discussed above.

There are a number of other entries on the certification list which are already long term or recommendations and were never considered certification items. These items should be relocated to Appendix A or another requirements list as noted in the miscellaneous changes section of Table 1. Order Item 6, Management Capability, page 14 of the certification list contains 5 subitems, a) through e). There is a statement on the list which indicates that all other actions were verified complete in NUREG-0680 and Supplements 1, 2 and 3. However, the task force believes that specific certification items should be provided for every subitem of Order Item 6. These subitems are listed in the miscellaneous changes section of this list. Although no remaining open items were identified when the task force reviewed these items, the status of each item should be verified.

D. Inspection Methodology

The Task Force inquired into the process or methodology by which a certification item is inspected, to understand how comprehensive a review is conducted. The TMI-1 resident inspectors indicated that the following guidance is used when closing out certification items:

- The inspector reviews the description of items to be verified as found in the following applicable NRC reference documentation:
 - -- NUREG-0680, TMI-1 Restart Evaluation Report, and Supplements 1, 2 and 3.

-- Safety Evaluation Report for NUREG-0737 items.

-- ASLB Initial (Partial) and Appeal Board Decisions.

- 2. The inspector determines what commitments the licensee has made to comply with an item by reviewing the applicable docketed correspondence. The licensee's multi-volume Restart Report which documents the licensee's response to all items required by the Commission's August 9, 1979 and March 6, 1980 orders, contains the majority of the licensee's commitments. Other correspondence documents the licensee's commitments for other requirements such a new requirements imposed by the Board.
- If any discrepancies between licensee commitments and NRC documented evaluations or requirements are found, the inspector seeks clarification from NRC management, beginning with the Senior Resident Inspector.
- 4. For each certification item involving modifications, the inspector at a minimum reviews the related portions of the licensee's QA program, examines installation records and functional test results, and reviews NDE and/or other inspection records, Engineering Change Memoranda (which include the proper 50.59 review), applicable drawings and the system design description.
- 5. If the certification item involves procedure changes, the inspector reviews the appropriate procedure changes and verifies that appropriate training has been conducted. Finally, for modifications, the inspector conducts a system walkdown to determine acceptability of the modification for restart and follows up on any licensee or NRC inspector identified problem.

It is noted that every certification receives the above comprehensive review as opposed to the normal sampling inspection performed for most NRC requirements. The Task Force is satisfied that the inspection methodology is sufficiently comprehensive to ensure that certification items are properly completed.

E. <u>Certification Items Which Cannot Be Completed Until Hot</u> Function Testing Or At Power

There are some certification items which cannot be fully completed until the item (usually a modification) is tested during hot functional testing (HFT) or power escalation testing (PET). For example, one certification item, Order Item 2, 79-05B-5, involving installation of an anticipatory reactor trip on loss of all main feed pumps or all reactor coolant pumps, requires testing at power to determine operability. The certification matrix lists each test procedure which the licensee is using to test a modification and the resident inspectors informed the task force that if the licensee has indicated that a modification will be tested at power, then they have scheduled completion of the certificacion item for PET. What is not clear is what essential testing is necessary for each modification to demonstrate its operability, and what testing is simply scheduled as an additional test to further checkout a modification.

The certification list was checked to identify all items which cannot be completed without the plant being hot or at power or must be completed at time of restart. These items and the appropriate test procedure are listed in Table 5.

It appears that some items on this list can be verified complete without PET testing. For example, Order Item 1a-1, EFW automatic initiation was previously tested per TP 233/1. A conference call was held on April 27 with a GPU startup testing engineer who indicated that TP 233/1 verified the operability of this modification. He also indicated that testing would also be accomplished via TP 800/2 at power which would provide additional assurance that the modified system would operate, but that in his view, this was not a required test.

To resolve this issue, the task force recommends the following:

- A letter be sent, or a meeting be held, with GPU to obtain their position on whether testing already performed on the modifications in Table 5 is sufficient to closeout the certification item.
- The Region I preoperational inspector review the licensee's position and closeout those certification items for which they agree that sufficient testing has been accomplished to verify operability.

Testing at power which is determined to be necessary should be addressed in a license condition as noted in Table 4, license conditions.

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It should be noted that at least one item, low power natural circulation testing, will require at power operations to complete.

F. License Conditions

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The Task Force has identified what it believes to be a complete list of the license conditions to be imposed upon TMI-1 at the time of restart. The license conditions, presented in Table No. 4, originate from the Commission Orders of August 9, 1979 and March 23, 1981, the ASLB PIDs, and the staff enforcement plan of February 1, 1982 as modified and approved by the ASLB Memorandum and Order of April 5, 1982.

The Task Force recommends that the license conditions extracted from the Commission's August 9, 1979 Order receive careful review and consideration prior to issuance. Long Term Order Item No. 2 (LT2) appears to have evolved into NUREG-0737 Action Items II.K.3.30 and II.K.3.31, the two open LT No. 3 items appear to be included in the NUREG-0737, Supplement 1 items. Action items II.K.3.30 and II.K.3.31 are being resolved on a generic basis. The NUREG-0737, Supplement 1 items are being implemented at TMI-1 by the same negotiation process being followed for other operating reactors. Thus, given the present implementation status of these action items, the Task Force recommends that the completion of these two long term Order items be consistent with the approach taken for other operating reactors. This position may require Commission confirmation.

G. Conclusions and Recommendations

The task force determined that 3 items should be added to the certification list, 3 items should be deleted from the certification list, and 15 items should be reworded to properly characterize the item.

The impact of the above changes appear to be minor in that in most cases the work was already being performed although the specific item was not carried in the correct place. Two items require staff SERs, and one item requires reinspection. One item concerning Dauphin county plans does not appear to have been addressed elsewhere although the verification of this item is probably under the cognizance of FEMA.

The following recommendations are provided:

- That the changes to the certification list identified in Table 1 be incorporated into the list.
- That the recommendation noted in the previous section, for resolving the issue of what testing is necessary to complete an item, be implemented.

III OTHER ISSUES

A. Multi-Plant Action (TMI-1 Restart)

Methodology

The Task Force has identified and reviewed a total 12S Multi-Plant actions (MPAs) of which 86 are applicable to TM1-1 (1977 to April 1983). Except for 15 MPAs 1/ all other MPA's applicable to TMI-1 have been completed. The completion of each MPA is based on letters issued to the licensee indicating acceptability and for the more complex issues, the letters include the staff's safety evaluations. Other action it has were completed by the issuance of amendments to the operating license. The records were reviewed to assure that the licensee for TMI-1 has been treated similarly to all other licensees of operating plants when applying NRC requirements. The 15 MPA's listed in table are the open actions for TMI-1. These were then compared with the open actions of other B&W operating plants.

Results

The results of the task force review indicate that the 71 MPA's are completed, Of the 15 open actions, one action, "B-41 fire protection" has the potential to impact restart.

By letter dated July 1, 1982, the TMI-1 licensee requested schedular exemptions from some of the fire protection rule (10 CTR 50.48 and Appendix R) implementation dates for TMI-1. Specifically, the licensee requested that the implementation dates set forth in 10 CFR 50.48(c)(2). 10 CFR 50.48(c)(3) and 10 CFR 50.48(c)(4), as modified by the staff's earlier exemption dated May 10, 1982, be deferred from July 1, 1982 until the TMI-1 cycle 6 refueling outage (approximately third quarter 1984 assuming a mid-1983 restart date). The staff response, dated March 9, 1983, denied the 10 CFR 50.48(c)(2) deferral request on the grounds of inadequate justification. Based upon a review of 10 CFR 50.48(c), the present shutdown condition of the plant, and the projected operating cycle for TMI-1, the staff concluded that the licensee's deferral request from 10 CFR 50.48(c)(3) and 10 CFR 50.48(c)(4) were unnecessary since, barring an unplanned outage of 120 days, implementation of the affected modifications is not required for TMI-1, per the rule, until the first (Cycle 6) refueling outage.

When the staff denied the licensee's 10 CFR 50.48(c)(2) deferral request, the licensee became of ligated, under the rule, to complete the 10 CFR 50.48(c)(2) modifications by April 1, 1983. It is our understanding that this schedule has not been met at TMI-1, and, further, that these modifications may not be complete at the time of restart.

The Task Force recommends that prior to restart, TMI-1 be brought into conformance with the schedular requirements of 10 CFR 50.48 by either (1) plant modifications or (2) the licensee be requested to furnish adequate justification for an exemption.

1/ of the 15 MPA's, two are a result of USI's (B-60 EQ and C-10 Control of Heavy Loads).

Conclusion

The open MPA's for TMI-1 are similar to those that are currently open for other B&W operating reactors with the exception of fire protection. The task force notes that some of the more complex actions (i.e., A-O2 Appendix I (RETS), A-O4 Appendix J, A-14 IST) are completed for TMI-1, as these actions are open for many of the operating plants. In addition, TMI-1 is above average as to the number of completed MPA's when compared to the number of completed MPA's for other B&W operating plants. In conclusion except for the resolution of the fire protection action item, the present status of the MPA's for TMI-1 are not prerequisites or conditions for facility restart.

B. NUREG-0737 Items

Methodology

This review addressed two distinct aspects of the NUREG-0737 status of TMI-1. The first aspect involved a review of the pertinent Commission orders, ASLB decisions, SECY papers, etc. to determine what NUREG-0737 implementation requirements may have been imposed upon the TMI-1 licensee, or upon the staff by the Commission. This review overlapped certain portions of the generic order review (section III D). The Task Force also considered what post-restart implementation requirements may be necessary for TMI-1.

The second aspect involved a review to determine the implementation status of each specific NUREG-0737 item. Completion documentation for many of the items was found in the TMI-1 Restart Safety Evaluation (NUREG-0680 and Supplements 1, 2, and 3) and other hearing-related documents.

Results

The Commission Order of August 9, 1979 required completion prior to restart of many items that subsequently evolved into NUREG-0737 action items. Completion of these items is assured prior to restart by the certification process. Other items for which the August 9, 1979 order required a demonstration of reasonable progress, or long-term resolution, also evolved into NUREG-0737 requirements. Completion of these items may be assured by a vicense condition of the TMI-1 license at the time of restart.

There are some additional NUREG-0737 requirements applicable to TMI-1 which are not addressed by the August 9, 1979 order. The staff position on these items has been that completion of these items are not necessarily preconditions for restart unless the implementation dates fall due prior to restart. (See staff response to Board Question 2.) This position was adopted by the ASLB. The staff, in SECY 82-250, later advised the Commission that, in keeping with the manner in which NUREG-0737 requirements were being implemented on other operating reactors, the staff intended to negotiate plant specific commitments for completion of NUREG-0737 actions for TMI-1 and to subsequently issue confirmatory orders to ensure compliance. By memorardum dated July 27, 1982, Chairman Palladino indicated that, as outlined in CLI-81-3, the Commission itself would consider the need for deferral of NUREG-0737 requirements on TMI-1 after hearing staff recommendations. The staff responded with SECY-384 and SECY-384A which presented the NUREG-0737 implementation status at TMI-1 and recommended implementation deferral for five items. The staff's recommendations were subsequently approved by the Commission. Accordingly, to assure completion of this group of items, the Task Force has recommended that completion of items listed in SECY-82-384 by the specified date (if that date precedes restart) be included as a prerequisite for restart (see Table 2).

Therefore, the only NUREG-0737 items which may not be done at the time of restart are those items for which the implementation date falls after the plant restart date. This group of items includes the items of NUREG-0737, supplement 1, and other items for which no implementation date has been specified by the staff. The Task Force recommendation for implementation of this group of items at TMI-1 is presented below.

A brief status of all NUREG-0737 items applicable to TMI-1 is presented in Appendix B.

In summary, there are 21 open NUREG-0737 items for TMI-1. Five of these items have been subsumed in Supplement 1 to NUREG-0737. Of the remaining sixteen, the Staff and licensee are close to resolving six (II.E.1.1, II,E.1.2, II.F.1.3, II.K.2.17, III.A.2.1, III.D.3.4). Resolution of II.K.3.1, II.K.3.2, II.K.3.30 and II.K.3.31 are contingent on staff efforts, and II.B.1, II.B.3, II.F.1.4, II.F.1.5, II.F.1.6 and II.F.2 are under staff review.

By letter dated April 15, 1963, the TMI-1 licensee submitted its response to generic letter 82-33, describing its commitments for implementation of the five NUREG-0737, Supplement 1 items. This submittal is under review by the staff. The Task Force notes, however, that the licensee's commitments are stated in terms of months after restart, even though many actions (e.g., procedure generation) would appear to be independent of plant operating status. The task force notes that the TMI-1 project manager will review the licensee's proposed schedule and will reach an agreement with the licensee on the final version.

Conclusions

The Task Force notes that, with respect to NUREG-0737, the implementation status at TMI-1 is above average when compared to the implementation status of other operating reactors. The Task Force recommends for the NUREG-0737, Supplement 1 items, and other item: for which no unique implementation requirements exist for IMI-1, that implementation at TMI-1 be conducted in the same manner as at other operating reactors.

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C. Plant Specific Issues

Methodology

Since 1977, the licensee requested 69 plant specific actions for TMI-1. Most of these actions deal with the licensee's requests for changes to the technical specifications. Other actions are concerned with plant component or system malfunctions. Each plant specific action is considered complete only after a safety evaluation or an amendment to the operating license is issued. These documents were reviewed by the task force to determine whether they impact restart. Twenty-one plant specific actions listed in Table 7 are open for TMI-1. These actions cannot be compared with open actions for other B&W operating plants since the TMI-1 actions are specifically related only TMI-1.

Results

The results indicate that 48 of the 69 actions were properly completed (i.e., by SER's) and need not be considered as impacting the restart. Of the 21 plant specific open actions listed in Table 7, four are to be resolved before restart. These four items are as follows:

A. Steam Generator tube leak Tac No. 47484 and TSCR 123 Steam Generator Repair technical specifications TAC 49831

In a letter dated August 23, 1982, the staff advised the licensee that the proposed kinetic expansion repair technique of the oncethru steam generator (OTSG) tubes and the subsequent return to service of the OTSG involved unreviewed safety questions and, thus, NRC approval of the overall repair program would be necessary. In a subsequent letter dated October 13, 1982, the staff clarified its position by advising the licensee that the kinetic expansion segment of the program could be performed without staff approval, but that NRC approval of the overall program was required price to resuming operation. The licensee has since performed kinetic expansion of all tubes in both CTSG, and is currently conducting its post-repair test program. The staff is presently reviewing the licensee's overall program. (TAC 47484). Additionally, the licensee has requested, under Technical Specification Change Request No. 123, that the technical specifications be revised to recognize the kinetic expansion process as an acceptable process for OTSG repair. This request was withdrawn and will be refiled after May 6, 1983. This amendment must be issued before the OTSG can be declared operable. (TAC 49831).

On April 20, 1983, the Appeal Board issued ALAB-724. They proposed that the Commission explore an issue raised by Board Notification 83-47 (4/4/83).

The Board Notification advised, among other things, that B&W and Westinghouse designed plants appear to rely upon pressurizer PORVs to depressurize the reactor coolant system following a design basis steam generator tube rupture (SGTR) event (complete rupture of a single tube). The Board suggested a nexus between the S/G issues and the issue raised by the notification and noted that LER's reported 2 instances of corrosion in PORVs at TMI-1. This design basis event assumes loss of off-site nower and the loss of normal pressurizer sprays. At many operating plants, and at TMI-', these PORVs are not fully safety grade. They have, nevertheless been considered sufficiently important to safety to have been subject to certain TMI Action Plan requirements (NUREG-0737) and to Technical Specification requirements. Action Plan Item II.D.1 required valve testing; II.D.3 required that they be provided with valve position indication; and II.G.1 required that they be provided with a source of emergency power. As part of the reactor coolant system pressure boundary the valve bodies have been required to meet Safe Shutdown Earthquake requirements.

The acceptability of non-fully safety grade PORVs is considered by the staff to be a generic issue for operating plants such as TMI-1. It is our understanding that the staff intends to evaluate this issue, along with other identified generic safety issues, to determine its safety priority.

The operability of the PORV is required by the Technical Specifications. Provided that the operability and integrity of the PORV at TMI-1 can be demonstrated prior to restart, the staff's current judgement is that the lack of fully safety grade PORVs is not of sufficient safety importance to warrant special consideration outside the context of its study of the generic issue. The corrosion mechanism, as in the case of the OTSG tube corrosion, appears to be sulfurrelated. The licensee is conducting its evaluation of this matter and will submit its findings when complete.

B. Hydroden Recombiner TSCR 109 (TAC 47854)

The TS change covering the hydrogen recombiner system has been submitted by the licensee. In accordance with NUREG 0680 supp. 3 (p.16) the amendment concerning this change request must be issued prior to restart.

C. Cycle 5 Reload Review (TAC 43968)

By letter dated March 16, 1979, the staff issued amendment No. 50 permitting the operation of Cycle 5 for TMI-1. The Task Force requested the views of DSI/CPB as to whether the March 1979 reload criteria was considered satisfactory in light of developments that may have occurred over the last 4 years. CPB has identified two issues that were not addressed in the original reload application, but are being addressed by other operating B&W reactors. These issues may result in changes to the plant operating limits permitted by the original staff evaluation of the Unit 1 Cycle 5 reload. The first issue involves the so-called TAFY/TACO penalty proposed by B&W's letter dated September 5, 1980 and accepted by our letter dated October 28, 1980 to account for previously nonconservative undetected nonconservatism in the LOCA initial conditions. The second issue involves the LOCA cladding swelling and rupture models as discussed in our letter dated July 13, 1982 to GPU Nuclear. Although the licensee has indicated by letters dated September 17 and November 1, 1982, that this second issue would be addressed by March 1983, we have not yet received such a submittal. Both of these issues should be resolved prior to restart.

Conclusion

The task force has found that since 1977, 69 plant specific actions have been initiated for TMI-1. Twenty one of these actions remain to be resolved of which three are recommended as prerequisites for restart. The plant specific action requiring completion prior to restart are concerned with the integrity of the steam generator and the operability of the PORV and block valve, specification of the Hydrogen recombiners, and the review of the Cycle 5 fuel reload.

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D. Orders

There were two portions of the order review. The first related to the generic B&W orders issued since the accident while the second was related to the Commission orders issued to TMI-1 following their original July 1979 order.

Babcock & Milcox Generic Order Review

Methodology

Our review entailed : comparison of the requirements imposed upon TMI-1 by order and ASLB findings since the TMI-2 accident vis-a-vis the requirement imposed upon the other B&W plants by the nine generic orders issued since the TMI-2 accident. The review was conducted to determine whether any Generic B&W order requirements were, for one reason or another, not imposed on TMI-1.

Results

Nine generic orders have been issued to B&W licensees since the TMI-2 accident. Four of these orders (in the areas of environmental qualification (2 orders), primary coolant pressure isolation valves (Event V) (1 order), and inadequate core cooling instrumentation (1 order) were also issued to TMI-1. The five generic orders not issued to TMI-1 were:

- A May 1979 order for design and procedural modifications emanating rom the TMI-2 accident,
- (2) A January 1980 order for implementation of NUREG-0578 "Category A" recommendations.
- (3) An April 1980 order for actions emanating from the Crystal River 3 incident of February 26, 1980.
- (4) A July 1981 order for NUREG-0737 action item implementation, and
- (5) A March 1923 order for NUREG-0737 action item implementation.

With respect to the May 1979 and January 1980 generic order requirements, we have determined that identical requirements were imposed upon TMI-1 by Order item 1.a through 1.e, and Order item 8 of the Commission Order dated August 9, 1979.

With respect to the April 1980 generic order pertaining to the Crystal River 3 incident, we did not discover a comparable order requirement for TMI-1. In fact, a document dated June 25, 1981 prepared for a TMI-1 ACRS subcommittee meeting indicates that the April 1980 generic order was not issued to TMI-1 because of the existing Commission shutdown order. However, we understand tht the actions that would have been imposed upon the licensee by the order will be completed by the licensee prior to restart, and inspected by Region I as one of the restart items. The Task Force considers Region I inspection (IEB 79-27 review which will include actions from the Crystan River event) to be an adequate means of assuring implementation and, thus, considers, a confirmatory order to be unnecessary. With respect to the July 1981 and March 1983 orders for NUREG-0737 item implementation, we have reviewed the pertinent staff testimony of Denwood F. Ross in response to Board Question 2 from the restart proceedings, the resulting ASLB PID of December 14, 1981, and the Commission Order of March 23, 1981 (CLI-81-3). We conclude from our review that, pursuant to the December 14, 1981 PID, the licensee is required to complete those NUREG-0737 items with implementation dates falling due prior to restart, thus providing requirements comparable to the requirements of the two generic orders. The Task Force proposed to implement the remaining NUREG-0737 requirements on TMI-1 is discussed in the NUREG-0737 section of this report.

The Task Force noted the December 10, 1982 order issued to TMI-1 and all other operating B&W plants requires licensee to install an inadequate core cooling (ICC) instrumentation system which conforms to the design parameters specified in NUREG-0737, item II.F.2. By letter dated March 10, 1983, the TMI-1 licensee responded with a description of a proposed ICC instrumentation system that it intends to install during the next (cycle 6) refueling outage. The staff is performing a detailed review of the licensees proposal system, but a preliminary review indicates that the proposed system and implementation schedule will be acceptable.

Conclusions

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The Task Force recommends that the Region I IEB 79-27 review be a prerequisite of restart.

TMI-1 Commission Order Review

Methodology

As part of the certification requirements review, the Task Force reviewed all Commission Orders (CLI) (approx. 40 orders) pertaining to TMI-1 issued since the initial July 2, 1979 shutdown order. The purpose of the review was to ensure that all Commission imposed requirements had been tracked by the staff or otherwise implemented.

Review

Our review identified one item from CLI 81-3 that should be implemented by license condition. CLI 81-3 directs the staff to continue to monitor the licensee's financial resources as long as is necessary and to report any health and safety implications to the Commission.

Conclusions

To assure that the information required to monitor the licensees financial resources is available to the staff, the Task Force recommends that a license condition requiring periodic submittal of the needed information be imposed upon the licensee at the time of restart. The needed information should be established by the staff. (See also Table 4).

E. Generic Letters

Methodology

All generic letters issued from August 1978 (7 months prior to the accident) to March 1983, (approximately 150) were reviewed by the Task Force. The jurpose of the review was to determine whether the licensee responded to the letter in a manner that was consistent with the approach used to resolve the concerns raised by the generic letter for all affected plants (e.g., delay their response to just prior to restart). Since many of the Generic letters were also the subject of MPA's, completion of the MPA was sometimes used to indicate that the licensee had responded. In other cases, the generic letter concerns were later enveloped or superceded by other reviews and in other cases, information supplied by the appropriate project manager was used as a basis to determine the status of the item.

Results

No issues were identified where TMI-1 had failed to supply a required response to a generic letter nor were any generic actions identified where TMI-1 had been inadvertently omitted. In pursuing the response for the generic letter of IEB 79-27, it was noted that the issue was technically open, but was being addressed in other review areas (i.e., Bulletins and Orders).

Conclusions

The review demonstrated that TMI-1 has responded to Generic Letters in a manner similar to other operating B&W plants through the entire period.

F. 15 Bulletins

Methodology

A review of all bulletins issued since 1979 was conducted to determine the status of these bulletins for TMI-1. Of the 6i bulletins (79-01 through 83-04), only 48 bulletins were applicable to the unit. Next a review of the remaining bulletins, found that 13 additional bulletins which describe specific components such as certain valves or switches were not applicable. The remaining 35 bulletins were then reviewed and a comparison was made between the licensee's commitment, as stated in docketed correspondence and the requirement stated in the bulletin. Additionally, we reviewed the NRC inspection report that addressed the licensee's response to the specific bulletin. Noted discrepancies were discussed with the licensee to determine if additional correspondence, documentation or amplifying information existed.

Results

Of the 35 bulleting that were applicable to this unit, 7 bulleting were found to be still open or requiring further action. These bulletins are identified in Table 3 to this section. Four of the bulletins have been addressed by the licensee but have not been reviewed by regional inspectors (79-27, 83-01, 83-03, 83-04). Bulletin 79-01 which deals with environmental qualification is still under review and discussion by GPU and NRC. Eulletin 79-16 which deals with vita! area access controls is awaiting NRC determination of proper access controls modification needed (if any) by the plant. The modification which may be needed is pending NRC rule changes in this area. Bulletin 82-02 which deals with the RCS boundary thread fasteners is still open pending action by the licensee during the next refueling. All actions for Bulletin 82-02 have been completed except bulletin item 1, 2 and 4 which require certain thread fasteners inspection. These thread fasteners identified in the bulletin are to be inspected during the next refueling as allowed by the bulletin, since they necessitate reactor vessel head removal.

Desing the review, several questions arose. From bulletin 79-11, licensee scated that all DB 50 breakers required for emergency equipment will be tested prior to restart. Discussion with the licensee demonstrated that the breakers in question have been tested and are still being tested under the licensee's surveillance program. From bulletin 79-13, the licensee comitted to check all feedwater supports inside the D-ring in containment during Hot Functional Testing (HFT). Discussions with the Licensee's startup and testing group demonstrated that these support had been tested during the September 81 HFT. In addition, bulletin 79-23, required the licensee to load test the "B" Emergency Diesel Generator (EDG) for 24 hours. At the time of the bulletin review, the licensee had not completed this task. Since then the "B" EDG has been tested.

Conclusion

From this review, it appears that no further action with respect to bulletins is required of the licensee prior to restart. However, because of this safety significance, it is recommended that Region I review licensee's actions in response to IE Bulletin 83-01 and 83-04 prior to restart. Actions with respect to IE Bulletin 79-27 are addressed elsewhere in this report.

G. Regional Items

Methodology

A review of Regional items, which included NRC inspection report outstanding items and Licensee Event Reports (LERs) from 1979 to 1983, was conducted to ensure that all NRC requirements necessary for restart of TMI Unit 1 have been identified and are being properly tracked. The LERs were reviewed for safety significance and to determine whether an LER was related to any item addressed in the certification matrix. For NRC inspection reports, the consolidated outstanding items list containing both open and closed items was reviewed to ensure that all issues related to restart were either closed or were identified as "required for restart".

Results

Three LER's dealing with corrosion of the RCS boundary require resolution prior to restart. Five other items, excluding IE Bulletin follow-up (See Section III.F.), also require resolution prior to restart. These items are listed on Table 2.

The Task Force noted that the number of inspection hours for TMI Unit 1 averaged 3500 hours per year for the period 3/79-3/83, as compared to approximately 1000 hours per year for other Region I operating reactors.

Conclusion

The Task Force recommends that the items noted above and listed as Restart Prerequisites listed in Table 2 be resolved for TMI-1 prior to restart.

H. Allegations/Investigations/Enforcement Act Affecting Restart

The Task Force received input from the Office of Investigations, the Regional Investigation Staff, and the Office of Inspection and Enforcement regarding the current status of their outstanding activities concerning TMI-1. Since some of that information is, as yet, not publically available, we will summarize to say that there are currently three investigations and one review being conducted by the Office of Investigations that may have the potential to impact on restart. (See Board Notification 83-08 and 83-46). OI currently estimates that the key portions of the investigations, as well as the outstanding review, will be complete by mid-June. In addition, the Office of Inspection and Enforcement is c rrently considering a need for action on one issue that should not effect restart.

Information on Hartman allegations is presented in the B&W trial issue section (I).

I. B&W Trial Issues

The Analysis of GPU v. B&W Transcript Falsification of Leak Rate Data

On April 18, 1983, the Staff provided the Commission with its comments on the analysis of the GPU v. B&W record.1/ The staff stated that except for the issue of the Hartman allegations concerning the falsification of leak rate data, the analysis provided no basis for changing the Staff's position, reflected in its immediate effectiveness comments, that TMI-1 can be restarted on the basis of the Licensing Board's partial initial decisions.2/ With respect to the leak rate issue, however, the Staff stated:

The Hartman allegations, among other things, touch upon the competence and integrity of TMI management. Thus, to insure that these allegations do not present health and safety concerns which require resolution prior to restart, the Staff is initiating actions to revalidate the NRC Staff position, supporting iMI-1 restart, on the management integrity issue. These actions include an evaluation of the effectiveness of the steps GPU has taken to insure adherence to station operating procedures and a review of current TMI-1 personnel and their current responsibilities vis-a-vis their responsibilities during the time frame of the Hartman allegations. Upon completion of this effort, now estimated to be mid-June, the NRC Staff will advise the Commission of the results.

In addition, the Staff will review its position on management and cheating issues in light of any additional information it obtains from DOJ after the DOJ investigations is completed.3/ Subject to DOJ agreement, the Staff will promptly make appropriate notifications of any significant new information that it obtains.4/

The staff provided additional information regarding the revalidation program to the Commission in response to an April 22, 1983 memo (Palladino to Dircks).

- 1/ NRC Staff's Comments on the Analysis of GPU v. 3&W Transcript April 18, 1983
- 2/ A second issue pertaining to transients and accidents in which steam generator decay heat removal is necessary was identified during the transcript review. However, the staff determined, prior to the April 18 Commission meeting, that the issue did not effect previous staff position.
- 3/ The Staff will also seek DOJ clearance to make appropriate notifications concerning relevant documents currently in the possession of the Staff prior to the completion of the DOJ investigation if such notifications do not compromise the DOJ investigation.
- 4/ Based on the additional information obtained, the Staff will initiate enforcement action is appropriate.

J. Board Notifications

Methodology

The Task Force reviewed the pertinent Board Nclifications issued to the Commission, the TMI-1 licensing board and/or the TMI-1 Appeal Board over the last year. The purpose of the review was to determine which Board Notifications require follow-up action, and to identify any open actions.

Results

The board notifications listed below discuss issues that need Technical resolution.

- BN33-08 NRC staff has received allegations relating to certain testing practices at GPUN. The matter is under investigation.
- BN83-33 Staff has identified two deficiencies in the revised TMI-1 Licensed Operator Kequalification Program.
- BN83-36 GPUN is unable to install a seismically qualified digital saturation meter as required by the IMI-1 Restart Safety Evaluation, NUREG-0680.
- BN83-46 An affidavit from Mr. Richard Parks raises a number of allegations generally concerning polar crane restoration activities at TMI-2.

Recommendations

BN83-36 provided a GPUN submittal that described the licensees viability to obtain a seismically qualified digital saturation meter for installation per requirements of the licensee's Restart Report and NUREG-0680. The licensee's submittal is under review by the staff. The Task Force recommends that this issue be resolved prior to restart. Accordingly, this issue "Resolution of BN83-36" is listed in Table 2 as a restart item.

As discussed in Section III H herein, resolution of the activities underlying BN's 83-08 and 83-46 may have the potential to impact restart. NRC actions to close-out the technical concern of BN 83-33 have been initiated.

K. Procedural Issues

The task force has noted that a number of procedural issues may require resolution prior to restart. These are listed below:

- Decisions.

Appeal Board Decision is expected May 31, 1983.

- Significant Hazards Consideration:

The staff must determine whether the S/G repair would represent a significant hazard. The licensee has withdrawn the initial amendment request authorizing operation with the repaired S/G's and plans to submit the amendment request after the effective date of the Sholly Amendment rule (May 6, 1983). This schedule would result in a final NRC staff determination on significant hazards about June 1983.

- Hot Operations It appears, based on cur review of CLI-81-3. that no further Commission authorization is needed for further hot functional operations by the licensee. Staff authorization in the form of a license amendment is needed for hot operations (above 250°F) with the repaired S/G's (since existing T.S. did not authorize the repair method). Therefore, we consider restart to be at Commission authorization of initial criticality.
- Psychological Stress On April 19, 1983 the Supreme Court ruled that the government need not consider "Psychological Stress" issues. Therefore, no further action is needed regarding TMI-1 restart (i.e., no notification of Court of Appeals 30 days prior to restart).
- Staff certification method Pursuant to the procedures set forth in SECY-82-250, at the time of licensee completion and staff verification that the certification items are complete, the Director of NRR will so certify to the Commission.

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L. Operator Licensing

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The task force requested the Operator Licensing Branch to determine whether there were any unresolved problems in the area of licensing of operators. One item pertaining to development and implementation of procedures for examination sampling to detect cheating, is a restart certification item, and, thus, must be complete prior to restart authorization. A second unresolved item was identified by the Task Force concerning the administration of non-plant specific simulator exams. As stated in memo addressing TMI-1 Restart Open Items from H. L. Thompson to T. Novak dated January 11, 1982, the Licensee is being directed to have its previously non-licensed operators successfully complete an NRC administered examination at the B&W simulator. The licensing of future operators appears (based on BN 82-21) to be contingent on satisfactory completion of an NRC administered simulator exams. From discussions with the Operating Licensing Branch, current policy is to require plant specific simulator exams if the simulator which is used is specific to that plant. The task force recommends that this item be resolved on TMI-1 prior to restart to determine what licensing procedure should apply to future operators (See Table 4). After resolution of this issue there appears to be no outstanding items that would adversely affect the restart of TMI-Unit 1.

M. Security

The Task Force received input by memo dated 4/26/83 from the Power Reactor SG Licensing Branch. There are two active issues related to security and one related to a safety/safeguards isque-vital area analsis. The NMSS position is that there are no issues that require resolution prior to restart.

N. ACRS

Methodology

One of the relevant areas for review by the task force is the staff's presentations to the Advisory Committee on Reactor Safeguards (ACRS) and the Committee's findings regarding restart. The staff's presentation and the Committee's finding's were reviewed by the task force to assure that (1) ACRS issues have been adequately addressed, and (2) prerequisites or conditions for facility restart have been identified.

Results

The restart of TMI-1 was the subject of subcommittee meetings on January 31 and February 1, 1980, November 28-29, 1980, June 25-26, 1981 and January 28, 1983. This matter was also discussed during the 248th and 255th ACRS meetings held on December 4-6, 1980 and July 9-11, 1981 respectively. Meeting summaries dated February 26, 1980, January 14, 1981, August 20, 1981 and April 12, 1983 for subcommittee meetings reviewed by the task force did not reveal any issues that would impact on the facility restart. The issues raised by the subcommittee were adequately addressed by the licensee and reviewed by the staff. In addition, some issues (e.g., I&E Bulletin 79-27) addressed in the subcommittee meeting are covered elsewhere in our review.

The committee's letter dated December 11, '980 to Chairman John F. Ahearne offered the following comments based on the finding of 248th committee meeting.

- 1. Conduct reliability assessments of the plant as modified,
- Provide an unambiguous indication of water level in the reactor pressure vessel,
- Provide instrumentation to monitor PORV valve position (i.e., open or closed),
- Assess the thermal/mechanical effect of high pressure injection on the reactor vessel during a small break LOCA without emergency feedwater, and
- 5 Continue studies identifying possible events leading to the loss of both DC battery trains.

In all but one of the above issues, the committee recommended that studies be conducted in a timely basis but completions should not be a condition for restart. The committee recommends that the staff adequately resolve the issue of providing monitoring instrumentation for PORV position indication prior to restart. The licensee has adequately addressed this matter and the staff's findings appear in NUREG-0680, Suppl. No. 3 item 2, 1.3a (P.26). In all other matters raised by the committee, the staff has judged that the licensee has made reasonable progress toward resolution of these issues (NUREG-0680 Rev. 3). The committee's letter dated July 14, 1981 to Honorable Nunzio Palladino, Chairman, reports on the restart of TMI-1. Although the committee found several deficiencies, they concluded that the licensee has demonstrated reasonable progress toward completion of those requirements necessary for facility restart. And, therefore, the restart of Unit 1 will not pose undue risk to the health and safety of the public. The deficiencies found by the committee were addressed in the staff's response to Dr. J. Carson Nark, Chairman, dated September 17, 1981. The review of these documents by the task force shows that the restart of TMI-1 will not be impacted by the issues raised in the documents.

Conclusion

Based on our review of the ACRS documents, issues raised by ACRS have been adequately addressed by the staff. In addition, no new issues have been identified as prerequisite or conditions for restart.

TABLE NO. 1

CERTIFICATION ITEM CHANGES

NEW CERTIFICATION ITEMS

Management FID 8/27/81

- 1) P16 Paragraph 424-428 NUREG-0737 1.C.5 "Procedure for Feedback of Operating Experience to Plant Staff" must be enforced at TMI-1 if restart is permitted. (see remarks column)
- 2) PID Paragraph 571

Staf: certify to Commission whether licensee has Startup Test Program which will provide additional operator training to satisfy the issue of whether to treat TMI-1 differently from other operating reactors because of the prolonged shutdown.

MODIFIED CERTIFICATION ITEMS

20

DELETED CERTIFICATION ITEMS

2.4

REMARKS

This appears to have been covered by item 6b), page 14 of IMI-1 Restart Certification Matrix

EMERGENCY PLANNING PID 8/27/81

3) PID Paragraph 1832

Staff certify to Commission that Dauphin County plan has been revised so that there is no suggestion in the plan that school students will be returned to their homes by bus in the early stages of an accident. 4) IV.L Page 42 of TMI-1 Restart Certification Matrix PID Paragraph 1536 and 2010b Change words to following: The staff shall review any changes made in the final risk county brochures and the PEMA Pamph?et on emergency preparedness, and advise the Commission prior to restart of the impact of the revisions on the intended purpose of these documents.

 11.0.h page 43 of TMI-1 Restart Certification Matrix "Stoff to Certify" Change PID Paragraph reference number from 1542 to 1842. TABLE NO. 1

CERTIFICATION ITEMS

NEW CERTIFICATION ITEMS

MODIFIED CERTIFICATION ITEMS

2 6

- 6) IV.L.a page 42 of TMI-1 Restart Certification Xatrix PID Paragraph 2010a Change to read: "EOF staffing requirements of PID 2010a and 1381 for restart. Final staffing subject to Commission review of ALAB 698 and 2010a" Under licensee status - delete all and add final action TBD. The rest remains the same.
- 7) IV.L.d page 42 of TMI-1 Restart Certification Matrix PID Paragraph 2010 delete Board suggrition.
- 8) IV.B&C page 44 of TMI-1 Restart Certification Matrix PID Paragraph 2421(2) Must be completed prior to restart.
- 9) PID Paragraph 2421 (1) Two year probation period of licensee qualification and requalification, test/training program delete as certification item. Make license condition.

reference II IV B&C page 44 & 45 of TMI-1 Restart Certification Matrix

DELETED CERTIFICATION ITEMS

REMARKS

CHEATING PID
CERTIFICATION ITEMS

NEW CERTIFICATION ITEMS

MODIFIED CERTIFICATION ITEMS

DELETED CERTIFICATION ITEMS

- 10) PID Paragraph 2421 (1) Should be deleted as a certification item, and made a license condition
- PID Paragraph 2421 (4) should be deleted as a certification item, and made a license condition.

PLANT DESIGN PID

- 12) 11.8.11.0 page 34 of TMI-1 Restart Certification Matrix PID Paragraph 1036 Change control grade auto initiation to safety grade auto initiation (not including automatic control) of EFW pumps
- 13) 11.8.11.0 page 34 of TMI-1 Restart Certification Matrix P1D Paragraph 1037 requirements should be moved to long term

may need an SER no SER covering this specific issue 6

REMARKS

remove NRR status note "see below"

- 35-

CERTIFICATION ITEMS

NEW CERTIFICATION ITEMS

MODIFIED CERTIFICATION ITEMS

- 14) II.B.II.O page 33 of TMI-1 Restart Certification Matrix PID Paragraph 943 HPI Cross-Connect change words in Restart Matrix to reflect that cross connect is also included
- 15) II.B.II.C page 29 of TMI-1 Restart Certification Matrix PID Paragraph 721 Abornormal Transients Operating Guidelines reword to include certify reasonable progress
- 16) II.K page 30 of TMI Restart Certification Matrix PID Paragraph 867 Computer data logging of incore TC's of the backup incore T/C display systemshould be "Install and have operational..."
- 17) 11.L page 31 of TMI-1 Restart Certification Matrix PID Paragraph 883 In-plant Instrument Ranges, Radio-Iodine Monitorsmust meet NUREG-0737 requirements.
- 18) II.L page 31 of TMI-1 Restart Certification Matrix PID Paragraph 875 in-plant instrument ranges noble gas monitors - add words to have staff review operating procedures.

DELETED CERTIFICATION ITEMS

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REMARKS

See PID Paragraph 1218, Item II.L.

CERTIFICATION ITEMS

NEW CERTIFICATION ITEMS

NUREG-0680

DELETED CERTIFICATION ITEMS

2 4

REMARKS

- 19) Page A4 of TMI-1 Restart Certification Matrix Relocate 2.1.6.a Systems Integrity Outside of Containment, to page 20 of the matrix.
- 20) Item 1.D page 6 of TMI-1 Restart Certification Matrix, Small Break Analysis. Reopen LP Reactor Trip setpoint change and LP ESF setpoint change in Region I status column.
- 21) NUREG-0680 Order item 8 2.1.8.b pige 22 of TMI-1 Restart Certification Matrix concerning safety grade containment Radiation monitors. Change NRR status column to "need SER".

SER on 11.F.1.3, Radiation munitors determined to be needed during NUREG-0737 review.

Miscellaneous Changes to Certification List

Under Order Item 6, page 14 of the certification matrix. Add the following items from NUREG-0680, Supp. 1

- 1. Training of Operating Staff
- 2. Facility Procedures
- 3. Operational Quality Assurance Program

4. Plant Maintenance

5-16. Order items 1 through 11 of the Commission's March 6, 1980 Order.

These items are added to ensure all certification items are listed. The added items should be complete, but their status should be verified.

CERTIFICATION ITEMS

NEW CERTIFICATION ITEMS

MODIFIED CERTIFICATION ITEMS

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DELETED CERTIFICATION ITEMS

2 4

REMARKS

The following certification table entries which are long-term or recommendations should be deleted from the list.

- Item 1a addt 1 7, EFW operability in steam environment, p. 5 of matrix.
- Item 4b), concerning ESF filter system,
 p. 12 of matrix.
- Its. II.M.8, conduct training on ATOG prior to ATOG implementation, p. 28 of matrix.
- Item II.B. Detection of Inadequate core cooling, p. 29 of matrix.

Miscellaneous Changes to Certification List

- Item IIQ, Long term modifications to EFW system, PID paragraph 1037, p. 34 of matrix. Move to Long term list.
- Item II.8.1, PID paragraph 1256, concerning suspension of work during Unit ? force movements, p. 40 of matrix. Move to Long term list.
- Item 11.8.7, PID paragraph 1303, concerning reliance of Unit 1 Solid Waste handling capabilities, p. 41 of matrix. Move to Long term list.

CERTIFICATION ITEMS

NEW CERTIFICATION ITEMS

MODIFIED CERTIFICATION ITEMS

5 .

DELETED CERTIFICATION ITEMS

1 4

REMARKS

- PIP Paragraph 2414 and 2419 (1) #1H Suspension without pay or license modification. Make Board recommendation.
- PID Pavagraph 2419 (2) Staff investigate 8/3/79 certification of VV to NRC for license renewal. Make Doard recommendation.
- PID Paragraph 2411 and 2419 (3) Board Imposition of Monetary Penalty. Make Ebard recommendation.
- Item 11.0., PID paragraph 2011, Board suggestion's on Emergency Planning, p. 43 of matrix. Make Board recommendations.
- 111.A., ALAB 698, NRC Staff's emergency response plans, g.46. Delete from Matrix.

RESTART PREREQUISITES

Management Plb dated 8/27/81

- Licensee plans to implement, prior to restart, certain human factors actions in the control room.
- Compliance with the overtime policy of NRC IE Circular 80-02
- The current views of NRC inspectors regarding the quality of the management of TM1 Unit 1 and the corresponding corporate management, staffing, organization and resource of Licensee. This item includes various Licensee commitments.
- Licensee's response to the Staff's health physics program at TMI-1 contained in Inspection Report 50-289/80-22.
- Licensee's commitment to properly stafi its IOSRG
- Licensee commitments resolving 30 significant findings from the HP appraisal. Findings include:
- " re verification that I training cycle completed before restart
- * upgrade of reactor building alarm * installation of high range monitoring equipment
- Revision of General Emergency EAL & RCS activity EAL to be consistent with NUREG-0654
- Revision of Licensee procedures for offsite dose projection to include a curve of estimated containment leak rate as a function of containment design pressure and actua' measured pressure
- kevision of Alert EAL on 300, C1 coolant activity level to precisely conform to NUREG-0654 criteria

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REFERENCES

REMARKS

Paragraph	246 of PID	The commitment has been captured by certification item II.N p. 31 of 46
Paragraph	342-343 of PID	This requirement bas been completed per NUREG-0680 Supp. 1 and 2
Paragraph	353-359 of P1D	This requirement is captured by Certifi- cation item order item 6 e) p. 15 of 46
Paragraph	384-386 of PID	This requirement is captured by Certifi- cation item order item 6 e), p. 15 of 46
Paragraph	413 of PID	
Paragraph	1404 of PID	

(NUREG-0745, Supp. 1 at 11-11 to 11-12). P10, Paragraph 1446

(NUREG-0746, Supp. 1 at 11-6, 11-7). PID Paragraph 1457

NUREG-0746, Supp. 1 at 11-11). PID, p. 1500, fn. 175

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REFERENCES

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REMARKS

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RESTART PREREQUISITES

- Licensee commitment dedicating for emergency response purposes:

25 air samplers

25 dose rate meters

20 oeta/gamma survey meters

4 dual channel analyzers

- Verification that one full training cycle has been completed prior to restart.

- Verification that Licensee has a final, approved procedure for quarterly inventory, operational checks and calibration of portable monitoring equipment to be used in an emergency

- Licensee commitment to modify its emergency plan and EPIPs to reflect reliance on its 16-station remote radiation monitoring system for use in verifying source terms and dose projection calculations once functionally tested.

- Contingency procedures with Dauphin County to notify Lancaster, Lebanon, Cumberland and York Counties, in the event FEMA fails to do so, for declaration of an Unusual Event, Alert or Site Area Emergency.

- As to the one training cycle to be completed before restart, this training will include:

-- training for offsite support organizations

-- formal training course on plant design features for Licensee senior management who joined the Licensee within the last 2 years and who will serve as Emergency Director or Emergenc. Support Director. Paragraph 1478 of PID

Paragraph 1475 of P10

Paragraph 1480 of PID

Paragraph 1494-85, 1489 of PID

Paragraph 1508 of PID

Paragraph 1969 of PID Paragraph 1965 of PID

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RESTART PREREQUISITES REFERENCES REMARKS CHEATING PID - Licensee committed to develop a procedure for certifying operator Paragraph 2350 of PID license candidates to the NRC including s.gned statements from training personnel, that operator candidates have indeed completed training requirements. Multi-Plant Action (MPA) 50.48 c.2 required modifications App. R Fire protection not installed. PLANT SPECIFIC Amendment 50 Reload analysis needs to be evaluated Cycle 5 Reload Analysis re-evaluation to present criteria due to potential PCT problem (NRC letter R. Reid to Hukill. dated 3/16/79. Will require license amendment and Hultiple Steam Generator tube leak protlem staff raview before steam generators can be declared operable. NUREG-0680 Supp. 3 Licensee has submitted amendment H recombiner Jech. Specs. 2 wquest; staff must issue prior to restart. ORDERS

1 IEB 79-27 review - Licensee complete actions and Region 1 complete inspection

IEB 79-27

TMI-1 did not receive an order as a result of IEB 79-27 and Crystal River events.

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-42-

. TABLE NO. 2

RESTART PREREQUISITES	REFERENCES	REMARKS
NUREG-0737 ITEMS (NOTE 1)		
11.8.3 - Post accident sampling systems	SECY-82-384	(Note 2)
II.B.4 - Training to mitigate core damage	SECY-82-384	
11.D.:.2 - Safety and Relief Vaive Tests	SECY-82-384	(Note 2)
11.D.1.3 - PORV Block Valve Tests	SECY-32-384	(Nute 2)
<pre>II.F.1.4 - Containment Pressure Monitor II.F.1.5 - Containment Water Level Monitor II.F.1.6 - Containment Hydrogen Monitor</pre>	SECY-82-384 SECY-82-384 SECY-82-384	(Note 2)
II.F.2 - ICC Instrumentation	SECY-82-384	See also Cert Item
11.K.3.30 - SBLOCA Model - Submit model modifications	SECY-82-304	(Note 2)

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INSPECTOR FINDINGS

Improve post-accident sampling capability of reactor coolant and containment atmosphere system

Page 22 of TMI-1 Restart Certification Matrix 14

1. 2

BOARD NOTIFICATIONS

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- Resolution of BN 83-36

BN 83-36, GPU 1tr dated 2/18/83

RESTART PREREQUISITES

REGION I CUTSTANDING ITEMS (01)

- OI number 82-BC-37, concerning installation of remote shutdown panel
- OI number 82-SC-O1, concerning reactor building spray system modification
- OI number 82-SC-02, concerning decay heat check valve leakage monitors in decay heat removal system
- OI number 82-LO-02, concerning cracks in associated piping of containment isolation valve WDG-V4 in the radwasie gas disposal system
- , C1 number 82-LO-11, concerning replacement of pressurizer power operated relief value (PORV) due to internal corrosion of value
 - OI number 81-LO-13, concerning primary to secondary tube leakage that occurred in both steam generators
 - OI number 79-BU-27, concerning loss of non-class IE instrumentation and control power system bus during operation

2. 4

RESTART PREREQUISITES

REGIGH I OUTSTANDING ITEMS (01)

- OI number 80-22-99, concerring review of licensee's imakage reduction program
- OI number 31-20-07, concerning inclusion of high range noble gas and effluent analyses in the accident assessment scheme
- OI number 81-20-12, concerning protection for personnel from excess radiation exposure during post accident sampling and analysis

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-45-

OI INVESTIGATIONS (Potential)

Investigation of allegation with potential management implications - 8N-83-08 and BN-83-46

Note (1): These items have licensee commitment dates before restart. Note (2): These items involve post-implementation review which need not ta

completed prior to restart.

REMARKS

TABLE NO. 3	-46-		
BOARD SUGGESTIONS/RECOMMENDATIONS		REFERENCES	REMARK S
EMERGENCY PLANNING PID AND ALAB 697, 698			
 The appeal board strongly recommends that information may protect themselves in an emergency be developed a in the plume EPZ. 	a specific to now farmers and distributed to farmers	ALAB-697 pages 28-29	Appeal Board made clear that these items are suggestions and not conditions of restart ALAB 697, page 30
 The appeal board urges that the agriculatural informa buted to all farmers in the 50-mile ingestion EPZ. 	tion brochures be distri-	ALAB 697 pages 29, 35	
 In addition to distribution of updated county brochur suggests that provisions for informing guests and emp displayed in prominent places. 	es, the board strongly loyees include placards	PID Paragraph 2010	
- The board suggests written plans for mass care emerge certain districts of York County.	ncy responsibilities for	PID Paragraph 2011a	
- That the Commission directs the staff to notify it of one year of restart.	KI distribution less than	PID Paragraph 2011b	
- That municipalities prepare written plans for the dis manpower and identify municipal needs to the county.	abled, traffic control,	PID Paragraph 2011c	
- That the Commission directs staff to report on resolu deficiencies in state, county and local plans.	ition of FEMA identified	PID Paragraph 2011d	
MENAGEMENT DID			•

Staff inspections of new computer maintenance program.

PID Paragraph 315

TABLE ND. 3 (Cont'd)	-47-	
BOARD SUGGESTIGNS/RECOMMENDATIONS	REFERENCES	REMARK
CHEATING PID		
 Board recommends the qualifications and delivery performance of Mr. Husted should receive particular attention during the forthcoming review of the TMI training program. 	PID Paragraph 2168	
 Goard recommends that Commission give high priority to staff efforts to val NRC operator examinations and to provide oversight in order to establish ca of examination. 	idate PID Puragraph 2372 pability	
- (1) G&H suspension without pay or license modification	PID Paragraph 2414 and 2419 (1)	
- (2) Staff investigate 8/3/79 certification of VV to NRC for license renewal	. PID Paragraph 2419 (2)	
- (3) Board Imposition of Monetary Penalty.	PID Paragraph 2411 and 2419 (3)	

DESIGN PID

- Include THI-1 in generic reviews of system interaction studies.

Memo/Order of 4/5/82 page 6

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License Conditions

Design Issues

- Eleven license conditions are required addressing various design issues, as specified on pages 2-4 of the staff enforcement plan dated February 1, 1982, as modified and approved by Board Order dated April 5, 1982.
- A license condition is required to specify completion of remaining plant shielding modifications (NUREG-0737 II.B.2.2) by startup from Cycle 6 refueling as identified in SECY-82-384A and approved by the Commission.
- A license condition is required to direct GPU to perform a probabilistic risk assessment (PRA) on TMI-1 as noted in licensee's commitment to the ACRS (licensee letter dated September 11, 1981). A date for completion of this study should be negotiated with the licensee.
- 4. A license condition is required for completion of certification items which cannot be completed prior to restart because they involve critical operation. The license condition for these items should specify completion of the applicable items prior to escalating to the next plant mode.

Emergency Planning Issues

 The Commission is reviewing the EOF staffing requirements of Emergency Planning PID, paragraph 2010a. The ensuing Commission decision may result in an implementing license condition.

August 9, 1979 Commission Order Issues

- *1. A license condition may be required for transient analyses and procedures for management of small breaks. (Long-term item #2.)
- *2. A license condition may be required for NUREG-0737, Supplement 1 implementation items which may have evolved from NUREG-0578, Category B recommendations. (Long-term item #3), Two items - 2.1.9 & 2.2.2.b.)

*These items are included for consistency and do not necessarily reflect Task Force recommendations. (See Section II.F.)

March 23, 1981 Commission Order Issues

 A license condition is required to enforce periodic submittal of information required to anitor licensee's financial reserves. Necessary information should be determined by the staff. TABLE NO. 4 (Continued)

License Conditions

Management Issues

- A license condition may be required to address Management PID, paragraph 583.3 requirements (which may be modified by BN-82-21 dated March 5, 1982). Paragraph 583.3 requires that licensed operators who have not previously held NRC licenses must complete an NRC-administered exam.
- A license condition is required that addresses Management PID, paragraph 583.5 requirements requiring annual reports on TMI-1 exact replica simulator progress.
- 3. A license condition is required that addresses Management PID, paragraph 583.6 requirements for annual operator requalification training on the basic principles trainer in addition to the one week each year at B&Ws simulator, at least until licensee's exact replica simulator is available.
- A license condition is required per Management PID, paragraph 583.9.
 V Paragraph 583.9 addresses shift staffing, shift rotation, control room manning and personnel allowances for training.
- A license condition is required per Management PID, paragraph 583.10. Paragraph 583.10 addresses the licensee's system for disseminating information that is important to safety.

Cheating Issues

- Four license conditions are required to impose requirements of items (1),

 (3), (4), and (5) of paragraph 2421 of the Cheating PID dated July 27,
 1982 (as modified by Addendum dated August 3, 1982). Items (1), (3),
 and (4) must be satisfied within two years after any restart authorization.
 Subparagraph 2421 (1) imposes a two year probationary period for audit
 of licensees qualification and requalification testing programs, Sub paragraph (3) addresses licensee's internal audit of training and test
 program, and Subparagraph (4) requires development of a procedure for
 routine sampling and review of examination answers. Subparagraph (5)
 specifies that any participation of Gary P. Miller in the startup program
 will be under supervision of a qualified GPUN official.
- A license condition is required per Cheating PID paragraph 2422 to ensure licensee retains all records pertaining to the investigation recommended at paragraph 2312-2314 of the Cheating PID.

TABLE 5

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CERTIFICATION ITEMS REQUIRING HFT OR AT POWER OPERATIONS

Item			Test Procedure (TP)	Plant Condition
Orde	r Item 1			
1.	p. 1, Item 1a-1	EFW Auto Initiation	TP 800/2	PET
2.	p. 2, item 1a-3	Auto EFW load on Diesels	TP 800/2	PET
3.	p. 5. Item 1a- Addt'1 6	EFW initiating inde- pendent of AC	TP 700/2	Low Power
Orde	r Item 2			
4.	p. 7, 79-05A-5	Valve Lineup at restart	N/A	HFT
5.	p. 9, 79-058-5	Anticipatory RPS trip	TP 800/2	PET
Orde	r Item 6			
6.	p. 15, 6 e)	Inspector views - one Outstanding Item requires HFT		HFT
7.	p. 18, 2.1.3b	lcc Instrumentation	TP 846/1	PET
8.	P. A4, 2.1.6a	Systems Integrity	?	HFT or At power
Desi	gn PID			
9.	p. 30, Item II.F	Demonstrate connection of pressurizer heaters to emergency busses	TP 700/2	Low Power
10.	p. 30, Item II.F	Incore thermocouples (duplicate of Order Item 8, 2.1.3b)	TP 846/1	PET
11.	p. 31, Item II.M	Valve lineup of restart (duplicate of Order Item 2, 79-05A-5)		HFT
12.	p. 33, Item II.0	HPI cavitating venturis and cross connect	TP 655/1	HFT
13.	p. 35, Item II.S	Low power natural circulation testing	TP 700/2	Low Power

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TABLE 6

OPEN MULTI-PLANT ACTIONS MPA'S

CODE	GENERIC SUBJECT
B-17	Tech. Spec. Surveillance for Hydraulic Snubbers
B-24	Purge and Vent Valves 1/
B-41	Fire Protection Appendix R
C-10	Control of Heavy Loads
C-14	Seismic Qualifications Auxiliary Feedwater 2/
8-57	DHR Capabilities
6-48	Adequacy of Voltage Distribution
B-59	Masonry Walls Design Review
B-66	Natural Circulation
B-73	Plans for Preventing Thermal Shock
8-72	NUREG-0737 Tech Specs.
D-17	Definition of Operability
D-18	NUREG-0630 Cladding Model
D-60	Equipment Qualifications
G-1	Reactor Coolant Pump Trip

NOTE :

- A staff evaluation, dated December 2, 1982, questioned the operability of the TMI-1 Pratt purge valves in the event of a design basis LOCA. The licensee subsequently submitted a reanalysis which is under staff review. It appears, however, that the licensee's reanalysis adequately demonstrates valve operability. An NRC SER is needed to finalize the position, but not necessarily before restart.
- 2. The staff is reviewing the licensee's submittals on the seismic qualification of the auxiliary feedwater system (C-14). The task force recommends that this issue be resolved for TMI-1 in a manner consistent with that for other operating reactors. Thus, the task force does not consider resolution of this issue to be necessary before restart of TMI-1.

Table 7

Plant Specific Action

TAC NO.	Subject Matter
43815	TSCR 99
43968	Cycle 5 Fuel Reload Review
46929	Appendix J Review
46948	TSCR 104
1 7	Appendix I Review
47050	IST Review
47484	Steam Generator Tube Leak
49894	TSCR 109 H Recombiner TS
48524x	Containment Flood Level
48838	TSCR 116 Reactor Building Purge
49271	Additional Water Storage Capacity
49619	TSCR 114 Post Accident Monitoring Instruction
49620	TSCR 120 HPI & LPI Bypass
49621	TSCR 121 Additional H Monitoring
49831	TSCR 123 Steam Generator TS
49916	Licensed Operator Requalifications
49955	TSCR 124 Snubbers
51057	Main Condenser off Gas I Sampler
49777x	Seismic Qualification of Saturation Meters
49814x	Instructor Qualification Program
49815x	Examination Answer Sampling Procedures

TABLE 8

IE BULLETINS REMAINING OPEN AT TMI-)

Bulletin		Date of	
No.	Subject	Issue	Issued to
79-018	Environmental Quali- fication of Class IE Equipment	1/14/80	All Power Reactors with an OL except SEP Plants
79-16	Vital Area Access Controls	7/30/79	All Holders of and Applicants for Keactor Operating Licenses
79-27	Loss of Non-Class- 1-E Instrumentation and Control Power System Bus During Operation	11/30/79	All Power Reactor Facilities with an OL and those nearing Licensing (for Action) All Power Reactor Facilities with a CP (for Information).
82-02	Degradation of Threaded Fasteners in the Reactor Coolant Pressure Boundary of PWR plants	06/02/82	All PWR facilities with an OL for action and all other OLs or CPs for information
83-01	Failure of Reactor Trip Breakers (Westinghouse)	2/25/83	All PWR facilities holding an OL and other power reactor facilities for information
83-03	Check Valve Failure Cooling Systems of Diesel Generator	3/10/83	All PWR facilities holding an OL and other power reactor facilities for information.
83-04	Failure of the UV Trip Function of Reactor Trip Breakers	3/11/83	All PWR facilities holding an OL and other power reactor facilities for information.



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CENTIFICATION REQUIREMENTS SOURCE DOCUMENTS

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Submitted by:

14/29/83 Date Project Manager, NRR D. Dilanni, 129,83 6 R. Jacobs, Project Engineer, RGI H. Nigholas, Lead Reactor Engineer, RGI 4/29 Date 4129/83 Date Project Manager, NRR J. Van M. Williams, Technical Assistant Director, Division of Licensing Assistant to 4/29/83 0 Date TMI / Resident Inspector, RGI Young, F.

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CERTIFICATION REQUIREMENTS



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UNITED STATES NUCLEAR REGULATORY COMMISSION REGION I 631 PARK AVENUE KIT & OF PRUSSIA, PENNSYLVANIA 19406

February 8, 1983

MEMORANDUM FOR: J. Van Vleit, Operating Reactor Project Manager (TMI-1), NRR

R. Conte, Senior Resident Inspector (TMI-1), Region I

SUBJECT:

FROM:

THREE MILE ISLAND UNIT 1 RESTART

The attached matrix is the updated listing of certification items (CRT) for the subject project (pages 1-47). Appendix A to the matrix is the updated listing of long term items (per Commission Shutdown Order) for which reasonable progress was certified and/or were committed to be completed prior to restart (RST). Appendix B to the matrix is the updated listing of RST issues as identified on the Region I outstanding items file (includes Appendix A items to be completed before restart). The updated CRT items are as per our discussions of February 1 and 3, 1983.

For economic and efficiency reasons, additional updating of this revision of the matrix and Appendix A will be on a page-by-page basis until all items are completed for the final report to the Director of NRR. Remaining open item updating involves too few pages to warrant an entire printout each month, considering the relatively large distribution list and the number of pages. I will maintain the updated master and a copy will be available upon request. A page index will be provided with each update.

In summary, Region I action continues to keep pace as items become ready for review. Planning and prioritization is in accordance with R. Starostecki to D. Eisenhut memorandum of December 7, 1982. Per discussions with licensee representatives, restart (if permitted) is targeted for May 1983.

Senior Resident Inspector (TMI-1) Region I

Attachments: As stated

			X		
Page No.	Revision No.	Date	Page No.	Revision No.	Date
1 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 13 14 5 16 7 8 9 0 11 2 13 14 5 16 7 8 9 0 11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0	2/8/83 2/8/83	46 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13	6 8 6 6 6 6 6 6 6 6	2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83 2/8/83

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THI-: MATRIX

I. NUREG-06HO THI-I RESTART EVALUATION REPORT ORDER		· <u>181</u> -	THI-I RESTART CONVISSION ORDER		Page 1 of 46 Levision 6
		LICENSEE ID NUIDERS/ DOCUMENTATION	(CENTIFICATION ITENS)	NRR STATUS	february 8, 1963
Short Term	Auto Initiation of FIR	1			
1	Hodify EFW pumps to automatically start on loss of main feedwater pumps or all reactor coolant pumps re ORDR 1a-3	BA-412012. (RM-13A) SUD-424A ECM-S-021 ECM-S-076	Accepted 10/2/81 Accepted 11/18/81	Complete - HUREG 0680	18 60-26, para 2.b (5-021) 18 62-01, para 7.b (both ECN) COMPLETE
82-8C 03,06	NRC review and evaluate test procedure and results re ORDR 1a-3	HTX 85.5.1 HTX 85.5.5 TP 233/1 HTX 800.5.1.1 TP-800/2	Complete Issued (see also la-3, o50-5)	N/A	IR B1-28, para B: TP 233/1 and test results IR B2-26 TP B00/2 PROC. COMPLETE EXCEPT TEST (FLT)
14-2	EFW valves fall open				
2	Hodify EfH control valve operators to fall open on loss of air pressure	BA-412012 (RH-13C) SOD-424A LCH-S-005	Accepted 9/25/81	Complete - · MIHLG U(80	18 81-22, para 5.6 18 82-01, para 7.c COMPLETE
	Install new back-up air supply to normal instrument air system	BA-412012 (RII-13) SIND-424A ECII-S-001 ECH-S-008	Accepted 12/18/81 Accepted 12/18/81	Complete - NUREG 0680	18 80-26, para 2.b 18 82-01, para 7.c COMPLE1
	NRC review and evaluate test procedure and results	HTX 85.5.3 TP 233/1 HTX 131.5.1 TP 248/1	Complete Complete	N/A .	18 81-28, para 8: 1P 233/1 and test results 18 82-01, para 8.b (%): 1P 248/1 technical
					TR 82-06, para 7.d: TP 248/1 tent results

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CARACTERISTICS CONTRACTOR STATE

1. INTREG-0680 TRI-1 RESTART EVALUATION REPORT		<u>THI-1 RESTART CONVISSION ONDER</u> LICENSEE 10 (CERTIFICAT.ON ITEMS)			Revision 6 February R, 1983	
RIAL M	TILD DESCRIPTION	NUMBERS/ DOCUMENTALION	LICENSEC STATUS	HRR STATUS	REGION 1 STATUS	
-]	Auto EFW load on diesels					
82-8C 03, 04	Hodify EFW to auto load motor- driven pumps on EDG's	BA-412012 (RH-13A) SDD-424A ECH-S-021	Rpt to ASLB 0/12/82 . Accepted 10/2/81	Complete - HUREG 0680	IR 81-14, para 4 IR 80-26, para 2.6 IR 82-01, flod Review 01 82-01-04 INC 34 - CLOSEF CONFLETE	
3	Safety Grade	(RH-13E) ECM-5-076	Accepted .11,18/81			
92-8C 04	HRC review and evaluate test procedure and results	 NIX 600.5.1 IP 622/1 IP 233/1 IP 600/2 IP's for RM-13 Series Mods 	Issued - HFT See below Issued	N/A	1R 62-01, para 8.6(6): 1R 61-28, 1P 233/1 A Results 1P 622/i technical adequacy 1R 82-26 TP 800/2 PROC. Composit EXCEPT 1551 (061)	
n-4	EFH tech specs					
82-8C 07	Propose revised F.S. 3.4.1- LFK flow path LCO	Operating Procedures C-1	TSCR 103 R2 Complete	AND. 78 155000 10/20/87	Pending BRR Action 1R 81-17 01 81-17-03	
4	Propose revised T.S. 4.9.12 operator control of manual EFW valves during periodic testing	Survetilance Procedures C-1	ISCR 103 R2 Complete Issue Proc. 2/83	A1D. 78 issued 13/20/82	18 81-21, para 7.(1) CONPLETE - Recheck 3/83	
82-8C 06	Propose revised T.S. 4.9.1.6- EFW flow path verification test after extended cold shutdown (10/6/82 COM STAT 12/82)	Surveillance Procedures C-1	TSCR 103 R2 Complete Issue Proc. 2/83	AND. 78 Issued 10/20/82	18 E1-21, para 7.(2) 01 fi1-21-kX: 1550-mce of Frait SP 1303-11.42 Est 3783	
a-5	EFW flow indication					
5	Hodlfy EfW system to provide flow devices on each supply line (see 8-2.1.7b)	· · · · · · · · · · · · · · · · · · ·			MuRIG-0680, 11cm 8-2.3.7.6	
	HRC review and evaluate test procedure and results (See 8-2.1.7.b)				Perform inspection pro- filem 8-2.1.71	
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1. HURLG-BLARN TH1-1 RESTART EVALUATION REPORT ORDER TILLI ITEM DESCRIPTION		DECENSEE TO (CERTIFICATION TEMS)		urr status	Brytsion 6 Lebruary N. 1981 REGION J. STATUS
1a-6 6	EFM alignment	C-)	Complete .	Complete - MUREG 0680	No inspection required
1	NRC check location and verifi- cation of adequate communication during EFW pump testing	C-4	Complete .	Complete - NUREG 0680	IR 81-21, para 7.(3) COMPLETE
8	Hodify EFW system to provide control room annunciation for all automatic start conditions	8A-412012 (RH-13G) • SOD-42A ECH-S-126 HTX 201.5.1 TP 233/1	Accepted 6/4/81 Complete	Complete - NUREG CGAO	TR 81-28, para 8: TP 233/1 and test results TR 82-01, para 7.d: Mod Review done COMPLETE
la-Add'l	Reliability Analysis				
1	Redundant Instrumentation				
9	Add new low-low level alarm to each condensate storage tank - Control Grade (Also see item LT 3-2.1.7.0)	BA-412012 (RH-131) 500-424D ECK-S-203 ECH-DRF 3550 MIX 41.5-1 TP 250/1.1 TP 250/1 TP 250/5 TP 250/2	Accepted 10/8/82 Accepted 10/8/82 Complete Complete Complete Complete Complete	Complete - NUREG 0680	IR 82-01, para 7.1: ECH-S-203 only; TP 250/1.1, TP 250/2 and test results OF 87-01-05: CLOSED IR 82-19 Hod Review IR 82-26 TEST REVIEW CONFLETE

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1. MIREG-0 1M1-1 0	DEBO RESTART EVALUATION REPORT	LICENSEE ID	RESTART CONVISSION ORDER CENTIFICATION ITEMS)	• •	Revision & February 8, 1983			
	ITCH DESCRIPTION	POCINICATATION	LICENSEE STATUS	NER STATUS	REGION 1 STATUS			
2	Endurance Lest							
16	NRC review test procedure test results and analysis of test results	HIX 85.5.5 IP 233/2 C-5	· Complete	N/A	18 81-28, para 8: TP 233/2 and test results COMPLETE			
3	Transfer of EFW supply							
11	Licensee action reviewed by HRM		Complete '	Complete - HUREG 0680	No inspection required			
4	EFW to Intact OTSG							
12	No licensee action required		Complete	Complete - NUREG 0680	No inspection required			
5	Auto EFW protection on loss of water source							
13	No licensee action required	·	Complete	Complete - NURL6 0680	No inspection recoired			
6	EFW Initiation Independent of AC							
82-8C 09 14	Nodify EFH pump turbine safety valves lift setpoint (& Rupture Restraint)	412012 (RIS-13H) ECH-151 ECH-190	Complete Accepted 10/14/61 Accepted 11/18/81	Complete - HUREG 0680	TR 82-01, para 7.e ECN 151 & 198 COMPLETE			

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. HUREG-0680		(C	RTIFICATION ITEMS)		Page 5 of 46 Revision 6 February 8, 1983	
RDER		LICENSEE ID NUHBERS/ DOCUMENTATION	LICENSEE STATUS	HRR STATUS	REGION I STATUS	
82-BC 10,02,05	Add two hour air supply for . EFW valves	412012 . (RH-1311)	EST 2/83	Complete - HUREG 0680	FST 3/83	
		ECH-S-215 DRF 1986 (Replace	Hantfold Kework-Test Accepted			
		NIX 131.5.2 TP 700/2 TP 250/1 TP 250/3.1	Issued - RFT Complete			
1 11	W operability in steam environment	TP 250/4.1 IP 250/5 -				
ыз-ыс 01	Modify EFV flow control valves and associated components for environmental qualification by 6/30/82 (Net planned for comple- tion by 6/30/82 per staff/ licensee comments to Commission on 1/28/82	412031 SUD-TBD ECM-TBD TBD C-7 C-8	Prep. Eng. Rpt to ASLAB 8/12/82 Est. Cycle 6 SU	Complete (Short Term) - NUREG 0680	lask scheduled for post- restart installation	
<u>8</u> Cr	oss-tie break				•	
15	Perform volumetric nondestructive examination (NDE) of 10 welds in the EFW pump discharge lines	412024 NUE Records C-9	Final Report Issued (Confirmed in Rpl to ASLAB 8/12/62)	ил	18 81-26 01 81-26-01 CLOSEP 18 82-19 CONPLET:	
16 Lf	W Independent of ICS					
16	Provide separate nanual EIW control station independent of ICS for each control valve in the control room	412012 (RH-13D) SDD-424A ECH-S-077 IITX 85.5.4	Accepted 12/11/81	Complete - NUREG 0680	IR 81-22, para 5.6 IP 81-28, para 8: IP233/ and test results IR 82-03, para 4 FORPLETE	
		1P 233/1 1P 250/1.1. 2	Complete			

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Page 6 1.1 Revision 6 THI-1 RESTART CONVERSION ORDER 1. INIREG-0680 february B. 1983 THI-I RESTART EVALUATION REPORT (CERTIFICATION ITENS) LICENSEE ID NUFIBERS/ OCDER REGION | STATUS LICENSEE STATUS HPR STATUS DOCUMENTATION ITEM DESCRIPTION ITCH Reactor trip on feed trip 10 No Inspection required -- Ho action required (susperseded by 79-058-5) Small break analysis 14 18 81-21, para 7(4) Complete -SP-1303-4.1 Complete -- Change low pressure reactor HUPEG 0680 JT219/103 C-12 trip setpoint Complete -IR 81-21, para 7(4) SP1303-4.11 Complete -- Change low pressure Engineered COMPLETE MIREC. 0680 8-12 Safety Features actuation setpoint Operator retraining le No inspection required [samine all operators-Augment retraining of all Reactor C-25 Complete ---Complete - (Document?) Operators and Senior Reactor Operators IE Bulletins Accident understanding 79-05A-1 No inspection required Compiete -Complete Licensee actions reviewed by NRR HUREG 0C30 Plant transfent review . -2 IR 83-02 COMPLETE UA. Piping Inspection Complete -- Licensee Inspect Integrity of 82-80 the electromatic relief valve Records 11 and associated discharge piping 1 Transfent procedures - 3 No inspection required Complete --- Licensee actions reviewed by HRR Complete IMIREG 0680 **Operating procedures** -4 No inspection required Complete -Complete Revised procedures reviewed by HURLG 0680 NRR

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1. INREG-0680		111-1 6	RESTART CONTISSION ORDER	Page 7 of 46 Revision 6 February 8, 1983			
THI-1	RESTART EVALUATION REPORT	LICENSEE ID (CERTIFICATION ITENS)			redruary 6, 1963		
1161	ITEM DESCRIPTION	DOCUMENTATION .	LICENSCE STATUS	NER STATUS	REGION I STATUS		
79-05A-5	Valve position review						
82-BC 12 23	NRC perform independent verili- cation of safety related system valve lincup (see PID of 12/14/81 No. 11.H 1 899)	Selected Operating Procedures	At Restart	на	Procedure review two weeks before criticality- Witnessing (NFT)		
82-BC 82	Valve position indication nameplate (HS safeties acoustic monitor)	BA-TBD (RII-6) SDD 667 ECH-S-052 ECH-036 TP 250/1.1 TP 250/2 . TP 654/1	Accepted Accepted Complete Complete Complete Complete	Complete - NUREG 0600	IR R2-19 100 REVIEW IR R2-26 TEST REVIEW IR R1-28 TP 554/1, TPE COMPLETE		
-6	Containment Isolation						
24	Licensee action described in 8-2.1.4		Complete	Complete - NURL 6 0680 (Counted)	No Inspection required		
-1	EfW valve procedures						
24	Licensee action reviewed by NRR :-	-	Complete	Complete - NURLG 0680	No inspection required		
-8	IfW operability						
25	Licensee action reviewed by NRR		Complete	Complete - NURLG 0680	No Inspection required		
-9	Transfer of containment liquids						
26	Licensee action described in N-2.1.4 and B-2.1.6a		Complete	Complete - Mud 6 0600	No inspection required		
	Salety system operability	•					
-29	Licensee action reviewed by HRR		Complete ·	Complete - tanal 6 0680	No inspection required		

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 THI-1 RESIANT CONNISSION ONOCR I ICENSEE IN (CERTIFICATION ITEMS) · · · HIREG-0680 THI-1 RES.ART EVALUATION REPORT

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OPICE OPICE OPICE OPICE	DOCUHENTATION	LICENSEE STATUS	INR STATUS	RECION 1 STATUS
-11 Personnel actions - 111-2 Licensce action reviewed by HAR	- 1 1	Complete	Complete - HIREG 0680	No inspection required
-12 Prompt reporting Licensee action reviewed by HRR .	· · · · · · · · · · · · · · · · · · ·	Complete .	Complete - NUREG 0680	No inspection required
2130-1 Natural Circulation		Complete	Complete - INISE G 0680	No faspection regained
-2 Vessel Integrity 3231 Licensee action reviewed by IIRR	۱ نو	Complete .	Complete - runt 6 0600	No Insuccition required
-3 POIN setpuint U2-UC Change reactor protection system 33 SU high pressure trip setpoint	120002 (J1-100) .C-12	1ssue Proc. [51 1/8]	MURCG 0680 & AMD. 78 155ued 10,20,82	18 81-21, para 7(5): procédures mby (re: 79-058-7) P(180106-116, ACT160
H2-HC Change PORV HIft setpoint	120002 (RM-9) 500-2230 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2220 500-2020 500-2020 500-2020 500-2020 500-2020 500-2020 500-2020 500-2020 500-2020 500-2000 500-200 500-20000000000	15sue Proc. EST 1/83 Accepted 9/10/81 Accepted 9/18/81	NW. 78 Issued 10/20/82	HK R1-21, para 2(5) procedures 01 81-21-XX 15500 5P1303-6.16 12 62-15 Hod Review CONFLELE EXCEPT PH86
	SP 1303-6.16 C-12	Review 3pt to ASLAB of 8/12/82 Complete	-	15500 (re: 79-058-7)

2 H Itamal reactor trip 2 H - ticensee action reviewed by NIR

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No Inspection required

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1. MIREG-0680	<u>IHI-1 R</u>	ESTART CONVESSION ORDER	· · · · ·	Revision 6 February 8, 1983			
ORDER TEM TEM DESCRIPTION	LICENSEE ID (C INNIOERS/ GOCUMENTATION	ERTIFICATION ITEMS)	RRR STATUS	PEGIOR E STATUS			
-5 Anticipatory trips							
82-BC Install safety grade reactor 15 trip on loss of both main fe water pumps or on a turbine trip (TAP 11.K.2.10) 34	412051 ed- (RI1-3B) SDD-641A ECH-S-068	Issue Proc. 12/82 Accepted 6/14/82	MIREG 0680 AND 78 1ssued 10/20/82	18 80-31, (asa 2 18 81-03, para 3 18 81-21, para 7(6) Procedures to be Issued 18 82-14 fied Review COMPLETE EXCEPT PROC. ISSUE (re: 79-058-7)			
82-BC KKC review reactor protectio 03.06 system checkout procedure -6 Prompt reporting	n HIX203.5.1 TP 376/1 TP 376/2 & Retest HIX 800.5.1.7 TP 800/2 TP 250/1, 2*	Complete Complete Complete Issued Complete	Complete - MUREG 0600	IR 81-11, para 7.a: IP 376/1, review, approval, technical content and acceptance criteria IP 81-11, para 7.b: IP 376/1 testing observa- tion IR 81-11, para 7.c: IP 376/1 test results evaluation IR 81-28, para 8: IP376/1 and test results IK 82-06, para 7d:1P376/2 Retest and test results IK 82-26, IP 250/1,2 IRI & IP 600/2 Tech. Adeq. COMPLETE EXCEPT TEST (PET)			
.36 - Licensee action reviewed by	NRR	Complete	Complete - HUREG 0680	No inspection required			
R2-BC Implement various Tech Spec E1 3-1 4:0 4:0	Selected edures Procedures nf. Pion)	Issue Procedures EST 2/03	AID. 79 Issued (Final AID.)	Review Control Herbanism & Sampling per separate list (see 058-365 above) - Review of NND 76 to 78 needed within this scope IR 62-19 - PART COMPL. EST 3/03			
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1. NUREG-0580 INI-1 RESTART EVALUATION REPORT -	: . <u>IMI-1 NEST</u> (CERT	ART CONTINUES ON ORDER		Page 10 of 46 Revision 6 February 8, 1983		
OPDER 11111 ITEM DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	HRR STE	REGION I STATUS		
79-05C-1 RCP Trips						
367 Licensee action reviewed by HRR	·	Complete	Complete - NUREG 0680	No inspection required		
-2 Small LOCA analysis		0 :				
3% Licensee action reviewed by HRR'	. !	Complete	Complete - NUREG 0680	No inspection required		
-3 Operator action - RCP trips	•					
40, - Licensee action reviewed by NHR	·	Complete	Complete - NUREG 0600	No inspection required		
19-05C-+ Reactor trip training						
140 - Licensee action reviewed by IIIR	·· ; ••	Complete	Complete - MURIG 0680	No inspecsion required		
-5 Inadequate core cooling						
42 Licensee action described in B-2.1.9	· · · ·	Complete	Complete - NUREG 0680	No inspection required		
3 41 Emergency Preparedness	1					
43 Complete actions as specified in separate safety evaluation, HUREG-0746 (SHORT TERM)	· · · ·	Complete	Complete - NUREG 0746	Complete (1R 81-20) (see also LT-4)		

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Page 11 of 46. Revision 6 1903 February 8, 1903	RECHOR L STATUS	IR R2-21 (Remains Open) 07 - U2 Valves IR 83-01 (CI05E0) COMPLETE	
	HIR STATUS	MUREG 0680 Issue LIC. Cond. Rear Restart	
COMILSSION ORDER CATION ITEMS)	LICENSEE STATUS	Rpt to ASLAB of 8/12/82 Complete 01 Complete	
THI-1 RESTART (CERTIFIC 1 ICENSEE 10	MUNDERS/ DOCUTENIATION	ç	:.:
EVALUATION REPORT	ITEN DESCRIPTION	ration of INI-142 liquid radwaste isolate connection from the reactor coolani bleed tanks (INI-2) to the reactor coolant asste evaporator (INI-1)* lisolate connection from the miscellaneous waste evaporator (INI-1) to the evaporator con- densate test tanks (INI-2)* fisolate connections from various INI-2 tanks to INI-1 Hquid asste processing system* isolate connection from INI-1 isolate connection from INI-1 and neutralizer tanks isolate transfer connection for aste evaporator concentrates between the two units* tain isolation per staff 2/1/82 ase condition and ASLB Order a4/5/02	
	NDER 1EH -	Separ	

	Page 12 af 46 Revision 6 af 46 February 4, 1903	NICLON 1 STATUS			IR 82-21 Hud Krvirw (Remains Open) 01: Rework and Test (ESI 3/83)	No Inspection required prior to restart (for first Cyrle 6 reforting)	IN UZ-ZI INUI REVIEW CONVLETE				_ b			
· · · · ·		KKR STATUS		Ccmplete - NUREG 0680										A Martin and A
	CONNASSION ORDER	LICENSEE STATUS		10/6/82 CON SIAT - Complete	Complete - SAT 01-COMPLETE 1/1/83 3EMORK 2/83	Engineering	Complete	Accepted 8/12/82 Accepted 2/5/82	Complete					
	INI-1 RESTAR (CERTIF 1 LICENSEE 10	NUMBERS/ DOCUMENTATION			PA-TBD Test-TBD .	8A-412336 (LN-16R)	04-412001 (14-16)	500-845A ECH-5-096 ECH-5-127	11 250/2		•		:.:	
· · · · · · · · · · · · · · · · · · ·	1. HUREG-0500 THI-T RESTART EVALUATION REPORT	ORDER . ITEM DESCRIPTION	Isolate connection for transfer of spent ion exchange resin between the two units.	b) <u>Gaseous radmaste</u>	B2-BC Perform hellum leak test of 17 Perform hellum leak test of gaseous waste processing system	MJ-UC Install engineered safety features 02 (LSF) filter system at 701-1 fuel. bandling area** (see P10 of 12/14/01 No. 111.0.1 1 1256)	02-06 - Modify IMI-1 fuel handling	We fuel handling floor from the auxillary building and control		 Haintain isolation per staff 2/1/82 licensee condition and ASLB Order dated 4/5/R2 **Prior to IIII-1 irradiated fuel movement after restart per staff 2/1/82 license condition and ASLB Order dated 4/5/82 				

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I. NUREG-0680 THI-1 SESTART EVALUATION REPORT		THI-1 NES (CER LICENSEE 10	TART CONVESSION ORDER TREECATION LITEMS)		Revision 6 February 8, 1983
ORDER	ITEN DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGIONE I STATUS
12:00	Hodify auxillary building and fuel handling building vention- tion system by adding two leak tight dampers	BA-412001 (LH-16A) SDD-845A ECH-S-124 ECH-S-220-1 HTX 104.5.1 TP 250/2.1 TP 250/2 TP 250/2 TP 250/5	Accepted 9/14/82 Accepted 9/14/82 Complete Complete Complete Complete Complete		IR 82-21 COMPLETE
61 18 18 47	Solid radwaste Install interim (Hittman) solidification system	BA-412191 (Wi-39) SDD-101A SDD-233A ECM-189 DA-1200 DRF 3350/3830	10/6/82 CON STAT - COMPLETE	Complete - NUREG 0680	IR 81-34, para 3 OIS CLOSED IR 82-03, para 4.d: MOD REVIEW COMPLETE IR 87-21, COMPLETE
42-0C	Segregate trash during collection to insure that THI-1 and THI-2 wastes remain separate	Affected TH1-1/TH1-2 Procedures	Complete (from Unit 1 scope)		IR 62-21 COMPLETE
(d)	Monituring system	· ·			he tereaction required
. 49-	llo changes required	· · · ·	NA	Complete - NUREG 0680	and inspection requires
c)	Sampling system				
в2-вс гь 50 БЛ	Construct Independent 111-2 sampling system	BA-226010 (TS-143) SDD-551A ECH-862 ECH-867	10/6/82 CON STAT COMPLETE . T/0 . T/0. U-1 Complete	Complete - NUHEG 0680	CONTEN

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1. IMREG-O TH1-1 R ORDEX	GOD ESTART EVALUATION REPORT	THI-1 REST (CERT LICENSEE 19 NUHBERS/ DOCUMENTATION	NHT CONVILSSION ORDER IFICATION ITEMS)	NUR STATUS	REGION 1 SIATUS
·····	Waste Managewent				
57 82	 Liquid and gaseous systems Licensee systems evaluated by NRR. No changes required 	• • •	на	Complete - NUREG 0680	Ko inspection required
82-8C 21 52	 5011d radwaste system Expand low activity solid was storage 	LC BA-432061 (WG-56) ECH-863 ECH-865	10/6-82 COH STAT COMPLETE (UI Scope) Resolve OI Complete 160 IWL's (1HI-2) 160 IWL's (1HI-2)	Complete - NUREG 0680	OI 80-22-39, CLOSED OI 82-8C-21 REHAIDS OPER PENDING TURNOVER IR 82-21 HOD REVIEW IR 83-01 COMPLETE
6 . 10	Hanagerial Capability (All action	s verified complete by NR 53	R (NUREG-0680 and Supp 1, 2 5 54 55 56 57 58	3 and 3, except as not 3 59 60 61 62	6364 65 66 6768
·11	IE review training manual and assure its adequacy	Training Hanual	Complete	Complete - HUREG 0680	18 81-33, para 2 8 3 01 80-19-11 CLOSED 18 82-16 COMPLETE
	b) Safety review	· · · ·			
	IE review final version of procedure for handling operating experience informat (see also PID II.A-II.H 10(a)	Engineering Procedure Ion EP-017 I-Xc) C-37	Complete	Complete - NUREG 0680	EP-17 replaced [P-13 COMPLET
82-8C 22	 c) <u>Health physics</u> If review staff qualification and training of chemistry personnel 	ns Qualification Records C-36	Comp≹ete :	Complete - MINEG 0680	Est 2/83

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1. HUREG-DGDQ 1H1-1 PESTART EVACUATION REPORT		THI-1 RESTART CONVILSSION DROER (CERTIFICATION ITEMS) LICENSEE ID STRIBERS/			Page 15 of 46 Revision 6 February 8, 1983
ORDER	ITEN DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	NRN STATUS	F utur 1 straig
d)	TAP 11.8.4 Training for Hiligating Core Damage				
81-33 01	Complete training progrem prior to exceeding 51 power (re: 11.A PID 11.H.7)	Training Records C-23 C-24 C-52	COMPLETE (Before RST - SECY A2-384)	Complete NRC LTR 4/22/B1 Safety Eval.	IR B1-33, para 3.C OL B1-33-01 Plant Banager and Emergency Leam Members IRNG OL' B1-33-02 CLOSED PENOLING LLC. COND. EST 2/83
-	Program description	. . .	Complete	Reviewed by NRP. Ltr-4/22/81	No inspection required
e)	Laspector Views				
82-8C 73	Resolve Inspection Findings of Accident (79-18), BIOL (0019), PAB (80-21), NP EVAL (80-22)	C-35	[ST 2/0] (Vent. Problems)	NA	(rst 3/03)
82-86 01,04 52	Install high radiation munitoring alarm system	UA-412064 (LM-29) SDD-661A ECM-S-099 DRF-4461/4807 HTX-281.5.2 TP 250/2	Accepted 11/1/82 Accepted 11/1/82 Complete	нА	IR 83-04 TEST WITH SS IR 82-19 TP 401/1 PROC. IR 83-02 TP 250/2 and 2.1 TRC

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1. INIREG-C TH1-1 1 ORDER	DGRO RESTART EVALUATION REPORT		THI-1 RESTAN (CERTIF LICENSEE ID NUMBERS/	T CONVISSION ORDER ICATION ITEMS)	ANTAL AND	Page 16 of 46 Revision 6 February R. 1983
110	TTEM DESCRIPTION		DOLORIERTATION	LICENSEE STATUS		
	Lesson Learned - Short Term					
2.1.1	Emergency Power Supply		•			
-19	Pressurizer heaters	4				
1 G- N2-BC 24	Demonstration of power supply transfer within 2 hours (See PID of 12/14/Bi No. 11.F 1 772)		DA-412063 (RH-16) SDD-902A ECH-S-071 ECH-172 ECH-S-188 HTX-195.5.2 TP 427/2 TP 664/2 TP 250/2 - 2.6 C-45 C-53	CONISTAT of 10/6/82 Complete Accepted 9/25/82 Accepted 9/10/82 Accepted 9/10/82 Complete Complete Complete Cemplete	Complete - HUREG 0680	IR 81-08, para 2.a.,b.,C IR 81-08, para 2.b IE 81-28, IP 664/2 IRL IR 82-01, para 8.b.(7): IP (27/2 technical adequacy IR 82-19 POD REVIEW A IP 427/2 IRE IR 82-26 TEST ACVIEW COMPLETE
73	Pressurizer level, relief and block valves					
	Licensee action reviewed by NRR		-	Complete	Complete - NUREG 3680	No inspection required
2.1.2	Relief Value Testing	. •				
74	Program Description	•••••		Complete	Complete (SECY 82-250) & NUREG 0680	Ne inspection required

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1. ININEG-DEBO "III-I RESTART EVALUATION REPORT		•	THI-1 RESTART CONCLESSION ORDER (CERTIFICATION ITEMS) LICENSEE 10		•	Page 17 of 45 Revision 6 February 8, 1983
ORDER 11EH	ITEN DESCRIPTION		NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
7.1.3.4	Valve position indication					
75	Install pressurizer relief and safety valve discharge flow dP transmitters across elbow taps		BA-412042 (RH-10) SDD-220A ECH-S-046 ECH-S-057 ECH-S-247 ECH-236 HTX 195.5.1 TP 664/1 TP 250/1-1.3 TP 250/3.1 TP 250/4.1 TP 250/2	COH STAT of 10/6/82 COHPLETE Accepted 9/17/82 Accepted 9/25/82 Accepted 5/18/82 Accepted 9/10/82 Complete Complete Complete Complete Complete Complete	Complete - NUREG 0680	IR 80-04, para 2 IR 80-05, para 4.r. 5.h documents OI 80-05-07 CLOSED IR 81-04, para 2.a,h IR 81-04, para 2.b IR 81-28 TP 664/1, TRE IR 81-27, para 5.b: IR 82-21 NOD REVIEU IR 82-26 TEST REVIEU COMPLETE
62-BC 26	Install PORV acoustic monitor		0A-412042 (RH-10) SDD-220A (CH-S-011 HIX 195.5.1 TP 664/1 TP 250/1.1 TP 250/1.3	Accepted 9/25/82 Complete Complete Complete	Complete - NUREG 06.0	IR 81-04, para 2.b IR 81-24, para 5.b: T? 664/1 and test results IR 81-28, para 8: TP 664/1 and test results See above also IR 82-21 HOD REVIEW WITH 82-8C-25 IR 82-26 TEST REVIEW

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I. NUREG-OGRO THI-1 RESTART EVALJATION REPORT ORDER			THI-L RESTART CUMUISSION ORDER			Page 18 of 46 Revision 6 February 8, 1953
			LICENSEE ID NUMBERS/	LICENSEE STATUS	HER STATUS	REGION 1 STATUS
IIII	TIEN DESCRITTION		DOCONCILIATION			
82-8C 27	Install PORV/safety valve tallp vs. ambient temperature thermo- couples (long term upgrade not required for restart	ipe	BA-412003 (PH-4) SUD-2230 ECM-S-239 HTX 195.5 TP 250/1.1 TP 250/2 TP 664/1	Accepted 9/17/82 Complete Complete Complete	Complete - WUPEG 0680	IR 82-28 IP 664/1 IRE IR 82-19 FOD REVIEW IR 82-26 TEST REVIEW COMPLETE
76	Existing instrumentation			Ppt to ASLAB of B/12/82 Complete (COM STAT of 10/6/82 - Complete except Test)		
82-DC 03,06,21	Connect in-core thermocouples a to plant computer	······································	BA-412056 (RI1-4A) SDD-625A ECH-S-002 ECH-S-012 ECH-S-012 ECH-S-157 HTX 123/5.1 TP 346/1 TP 250/2 TP 657/1 SP 123.1 TP 846/1	Accepted 7/12/82 Accepted 7/12/82 Accepted 7/12/82 Accepted 7/12/82 Complete Complete Complete Complete Issued - HFT	Complete - MUREG 9680	1R 81-10, para 3: Design, procurement and installation records for FCMS S-002, S-009, S-012, S-157 OI 81-10-01 flosed IR 81-28, para 8: TP 346/1 and test results (IR 82-19 also) OI 81-20-03 CLOSED IR 82-14 Mod Review IR 82-19, IP S57/1 IRE & TP 846/1 PR0C. IR 82-26 TEST REVIEW
	Provide extended range for Th temperature measurement		BA-412044 (L11-2) SDD-TRD EC(1-S-032 MTX 152.5.3 TP 657/1 TP 250/1, 1.1	Accepted 5/24/82 Complete Complete	Complete - NUREG 0600	EXCEPT TP 846/1 COMPLETE EXCEPT TEST (2011) TR 82-01, para 8.b.(7): TP 657/1 technical adequacy TR 82-10: Package Review TR 82-19, TP 657/1 TP TR 82-26 TEST REVIEW COMPLETE

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I. NUREG-GOND	THI-1 REST/	INT COMMISSION ORDER		Page 19 of 46 Revision 6 February 8, 1983
ORDER ITCH ITEM DESCRIPTION	LICENSEE ID MINIERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION I STATUS
Saturation meter	• • •			
02-DC Install primary coolant satur 01,04 meter 29 re: NUREG 0752 - 11.8 PID 11.N ¶914-915 82-17 02	ation BA-412044 (LH-1) SDD-211A SDD-665A ECH-S-129 ECH-248 HT# 126.5.1 TP 345/1 TP 645/1 TP 250/1, 2	Accepte' 6/21/82 Accepted 3/29/82 Complete Complete Complete	Complete - NUMEG 0752 & 0680	<pre>IR 81-14, para 3: IR 81-24, para 5.5: YF 645/1, testing and test results & witnessing FR 81-26, para 4.5: Installation and testing records (5-129-and 248, IP 345/1 & 645/1 tech. adequacy) IR 82-07, IP 645/1 tech. adequacy) IR 82-07, IP 645/1 tech. PIR 11, N IR 87-17, selected mod review (see 11.8 PIR 11.8) IR 97-26, IP 345/1 & IP 645/1 IN IEST REVIEW COMPLET (HET - 01 82-17-07 ISALCM, PROC.)</pre>
2.1.4 Containment Isolation 7 82-8C - Provide reactor building (R8) 1 isolation on high radiation (not required per ASL8 PID Vol. 1, para 834) (TAP 11.E.4	BA-412652 (RH-53) SDD-642A 2(7)) ECH-S-059 HTX 183.5.1 TP 250/1 IP 366/1 IP 366/2	COM STAT of 10/6/82 COMPLETE EXCEPT TEST Accepted 9/17/82 Complete Complete Complete ISCR 116 of 8/13/82 Valve Test Proj.	Complete NUREG 0680 A NRC LTR 4/22/81 Safety Eval Review ISCR	IR 82-01, pera 8.6.(4): IP 366/1 & IP 366/7 technical adequacy IR 82-07, IP 366/7 IRE IR 82-07, IP 366/1 IFE IR 82-26 TEST 814110 MOD REVIEW REHAINS.

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I. MIREG-0680 THI-1 RESTART EVALUATION REPORT		THI-1 RESTART CONVISSION ORDER (CERTIFICATION ITENS) LICENSEE ID				Page 20 of 46 Pevision 6 February 8, 1983
ORDER ITEN	ITEM DESCRIPTION	•	DOCUMENTAT SON	LICENSEE STATUS	NRH STATUS	REGION L STATUS
82-8C 30	Provide RB isolation on reactor trip/high RB pressure/HP1 (re: LMJ3)		BA-412052 (RH-5C) SDD-642A ECH-S-169 ECH-S-070 ECH-164 HTX 91.5.1 TP 334/1 TP 334/2 TP 250/1.2 TO 250/2.1, 2.2	Accepted Accepted 10/27/82 Accepted Complete Complete Complete Complete	•	IR 80-05, para 4.c: IR 80-31, para 3: (5-070) IR 81-04, para 3: (5-070) CONPLETE IR 82-07, IP 334/1.2 IRF IR 82-24 NOD REVIEW IR 82-26 IEST REVIEW IR 81-07, para 3: (164 & 070)
82-8C 01,04 31	Provide R& isolation on NSCC and ICCC pipeline break (re: RM-16: ECH-S-180) LM-33	1.12.	BA-412052 (RH-5D) SDD-642A ECH-S-135 DRF 1973 ECH-S-208 MTX 91.5.2 TP 334/3 TP 250/1,2	EST 2/03 IVI IVL Accepted 7/8/02 Issued Complete	Complete - NUREG 0680	1R 82-26 1P 250/2.6 (M1-6) 1Rt 1R 83-02 1P 334/3 PROC. EST 3/83
2.1.59	Dedicated Hydrogen Penetrations					
2.1.5.078	Design (re: LT-3-2.1.5.a)	•••		Complete	Complete (SECY 02-250) & HUREG 0680 (Counted)	No inspection required
21.6.00	Not required per Order B/9/79 - see LT-3-2.1.5.c	ment			(Counted)	No inspection required
60						No. Anomalian construct
	Short Term (See also LT-3-2.1.6.a)		· · · · ·	Lomplete	INIREG 0680 (PET COUNT)	ne inspection required

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I. NUREG-0680 TMI-1 RESTART EVALUATION REPORT ORDER		THI-1 REST (CERT LICENSEE 1D NUMBERS/ DOCUMENTATION	NET CONVILSEION ORDER IFICATION ITEMS)	INR STATUS	Page 21 of 46 Revision 6 February 8, 1983 REGION 1 STATUS
2.1.6.b GI Plant Shielding Analysis (re: LT-3-2.1.6.b)			Complete	Complete (SECY 82-250) & MUREG 0680	No inspection required
2.1.7.a QZErk auto Initiation	•				
Control grade			Complete	Complete - NUREG 9680	No inspection required (see also 11.8 PiD 11.0 No. 1)
2.1.7.602 EFW flow Indication	· · · .				
Control grade	1.		Complete To certify safety grade	Complete (SFCY 82-250)	No Inspection required See below
B2-BC Safety Grade - add two sonic 41 flow devices on each EFW supply line re: TAP II.E.1.2 (PART) LT-3-2.1.7.b		BA-412012 (RM-138) SOD-424A ECH-S-006 ECM-168 ECH-168 ECH-5-107 DRF 4646 MIX-05.5.2 (TP 233/3) TP 250/1.1 TP 250/2, 1	Complete Accepted 5/26/82 Accepted 10/22/82 Accepted 10/22/82 Accepted 10/22/82 Complete Complete	Complete - HURLG 0630 Supp. 3	<pre>(R 02-17, (Bud review to be completed after tit. 1/0) (R 03-01: Bud Review Open pending Lic. Certify Safety Grade (R 03-02 TP 250/2 TRL)</pre>
2.1.8. a @ A Post accident sampling (design)			Complete	Complete (SECY 87-250)	No inspection required
<u>LT for ST</u>			LTR 5211-82-209 of 9/7/82 Parts/Work 12/82 (SECY 62-24, commit 3/31/83)	HUREG 0580 Supp. 3 (NOT TAW 0737)	

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1. NUREG-0680 TH1-1 RESTART EVALUATION REPORT		THI-3 RESTAR	T CONVILSSION ORDER ICATION ITEMS)		Page 22 of 46 Revision 6 February 8, 1983
ORDER	ITEN DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION I STATUS
82-BC - 01,04 42	- Improve post-accident sampling capability of reactor coolant and containment atmosphere system (by 1/1/82 per TAP 11.8.3)	BA-412032 (LH-24A) SDD-55A ECH-S-271 DRF 4439	Ltr 5211-82-204 9/2/82 Add. Info by 12/31/82 Accepted IWLS	HRC Ltr 7/8/82 Additional info. req. for post impl. review of compliance HRC LTH 10/7/82	IR 81-28, para R: TP 677/1 and test results OI 21-29-03: CLOSED PENDING FURTHER NRW PELICU (Limited Review Refore Restart)
	LH-24A RCS Sampling	MTX 170.5.1 Tr 250/3.1, 3.2 5. 4.1	Complete		
		1P 677/1 1P 700/1 1P 250/et al	Complete		
82-8C 43	LH-248 Cont. Sampling .	(1,N-248) 588-5558	Ltr 5211-82-204 9/2/02 Add. Info by 12/31/02	Same as above	(Limited Review Before Restart) IR 83-02 IP 277/1 PRGC.
82-8C 02,05	re: L1-3-2.1.0.a TAP 11.8.3 (PART)	ECH-S-196 ECH-S-190, MIX-168.5.1 TP 277/1 TP 250/et al	Accepted 10/22/82 Accepted 10/22/82 Issued Complete		
2.1.0.6	Radiation monitor range (control grade	<u>)</u>	Safety grade to be completed	Complete (SECY 02-250)	Inspection per below
112-10C 104,44 85	Safety Grade Install two safety grade in- containment radiation monitors that are adequately separated (Cert. Item)* re: LI-3-2.1.8.b	BA-412013 (LM-23) SDD-661C ECH-S-128 ECH-260/PRF 1936 C(M-S-282	CON SIAT of 10/6/82+ Complete Accepted 10/15/82 Accepted 10/15/82 Accepted 10/15/82	MMLG 0680 Supp. 3	18 82-01, para 8.6.(3): 1r 366/3 technical adequary [SI 2/83
	TAP 11.F.1.3 Per Staff Enf. Plan dated 2/1/82 and	HIX 103.5.2 HIX 103.5.2 IP 366/3 IP 250/2 C-18	Complete Complete		

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ASLB Order dated 4/15/82 +SECY 82-384 (Bef. 8ST) (Est. 12/31/02) an de la la la la deserve de la deserve de

1. NUREG-0680 THIT-T RESTART EVALUATION REPORT		CERTIFICATION STEMS)				Page 23 of 46 Revision 6 February 8, 1983
ORDER .	ITEN DESCRIPTION -	•	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	ergion 1 stabis
82-8C 45 86	Install high-range gas effluent monitors (Cert. Item)*		DA-412061 (RH-21) SDD-668A ECI1-S-171	Est 2/83 Accepted 5/24/82	NUREG 0680 Supp. 3	PENDING LIC. CONFL. EN-25A EST 3703
	re: LT-3-2.1.8.b TAP 11.f.1.t		HTX 183.5.3 SP 1302-3.1 417013 {LH-25A} SOD-5618 ECH-S-173 HTX 183-5.4 TP 366/4 TP 366/5 IP 250/2 TP 366/4,5,6,7,8 C-19,60	Completed INL/TEST (OUT FOR CAL) Issued Issued		
82-80 46 87	Install expanded range radio- lodine/particulate sampling system (Cert. Item)*		BA-412013 (LH-258) SD0-G618 ECH-S-275 HTX 168.5.2	Complete Accepted 12/2/82	WIREG 0680 Supp. 3	IR 82-26 TP 37771 PEOC. PENDING LIC. COMPL. EST 2783
(5) ();	TAP F. 1. 2 TAP F. 1. 2 Nort term modification included in nal long term monitors per above)		TP 250/2 TP 377/1 C-19, 60	Complete Issued		

*Per Staff Enf. Plan dated 2/1/82 and ASLB Order dated 4/15/82

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1. MIREG-0600 THI-1 RESTART EVALUATION REPORT		<u>INI-1 REST</u> (CERT LICENSEE ID	NIT CONVISSION ORDER		Page 24 of 46 - Revision 6 February 8, 1963
ORDER 111M	ITEN DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
2.1.8.004	Indine Instrumentation				
82-8C 32	Conduct training on the in-plant radiolodine moniturs provided for the control room and technical support center	Training Records C-20	COM STAT of 10/6/82 COMPLETE	Complete - HUREG 0680	Est. 2/83
2.2.1.0 65	Shift supervisor responsibilities				
0	Licensee action reviewed by NRR	· -	Complete	Complete - NUNEG 0680	No Inspection requires
2.2.1.1. 84	Shift technical advisor				
10	Licensee action reviewed by NRR		Complete	Complete - NURLG 0680	No inspection required
2.2.1.04	Shift turnover				
	Licensee action reviewed by NRR	• ••	Complete	Complete - NUREG 0680	No inspection required
82-8C 33	Evaluate effectiveness by Dept Heads and OQC Review	C-21 C-22	Complete	Complete - NUREG 0680	IR 82-18 COMPLETE
2.2.2.067	Control room access	2			
1-	Licensee action reviewed by NRR		Complete	Complete - HUREG 0660	No Inspection required
2.2.2.6 9	Pastte tech support center				
82-8C 34	NRC confirm records and drawings assembled in TSC during site visit	Selected Pecords and Drawings	Complete	NURLG 0680 \$ 0746	1R 63-02: COMPLEX
		· · · · · · · · · · · · · · · · · · ·			

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1. INBALG-0600 THE-1 RESTART EVALUATION REPORT ORDER	TMI-1 RE (CE LICENSEE ID NUMBERS/ DOCUMENTATION	START COMMISSION ORDER RELECATION TEHS)	HHR STATUS	Revision 6 february 8, 1963 REGION 1 STATUS
BZ-BC Complete modifications 15 re: IAP III.A.1.2	BA-412065 (PH-BA) SDD-903A ECI:-S-245 ECH-S-219 ECH-S-258 HTX 36.5.2 TP 250/2 TP 250/2.1 LTR L1L 250 4/16/81	Complete Accepted 9/25/82 Accepted 9/25/6 Accepted 9/25/8 Complete Complete Complete LTR 5211-82-134 6/9/82 (Sched. 10/82 Except: BEOF 3 EMACS	Complete - HURLG 0746 and Supp) Review	18 82-26 1651 REVIEN 1900 REVIEN 151 2783

2.2.2.call Onsite Operation Support Center

Long Term Items

-- Licensee action reviewed by HUR HA

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Complete

Complete -RUREG 0680 & 8746 No inspection required

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LT-1 to 4 (see matrix Appendix A) +

PARTIAL INITIAL DECISION . ROCEDURAL BACKGROUND AND MANAGEMENT ISSUES	THI-1 REST/ 8/27/81 (CERTI LICENSEE ID NUMBERS/	RT CONMISSION ORDER FICATION ITEMS)		Page 26 of 46 Revision 6 February R, 1983
TEN DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	MICK STATUS	
Fallure to keep Accurate and Complete Haintenance Records Related to Safety Items				
Staff inspections focus in part on- ability of licensee to keep track, of its maintenance records and priorities of its maintenance, and on continuing auditibility of maintenance records	Haintenance Records	Complete	-	IN 81-27, para 4 01 01-27-01: CL95ED COMPLETE
ASLO opinion that auditability of records would be improved 17 QC observation hold points were signed off by QC at each hold point	Affected Admin/QC Procedures	-		ER 81-27, para 4.c(3) CONVLETE
Pour record keeping practice of long delays in the QC approval: being obtained and noted after completion of the work	Affected Admin/QC Procedures			IR B1-27, para 4.c(4) CONVLLI
Job ticket determination of whether work has an effect on nuclear safety	HP 1407-1 ' Rev. 9	LIR 5211-02-300 of 12//12/02 COMPLETE	-	IN 81-27, para 4.c(5) re: 01-81-27-03; IN1 Licensing Section memorandum dated Sep 22, 1981 (0 List) IR 83-02; CLOSED TO HOTIFY CONNESSION (111)
	ARTIAL INITIAL DECISION OCEDURAL BACKGROUND AND MANAGEMENT ISSUES ITEM DESCRIPTION Failure to keep Accurate and Complete Haintenance Records Related to Safety Iters - Staff inspections focus in part on ability of licensee to keep track, of its maintenance records and priorities of its maintenance, and on continuing auditibility of maintenance records - ASLB opinion that auditability of records would be improved If QC observation hold points were signed of by QC at each hold point - Poor record keeping practice of long delays in the QC approvals being obtained and noted after completion of the work - Job ticket determination of whether work has an effect on nuclear safety	ATTIAL INITIAL DECISION DOCEDURAL BACKGROUND AND HAMAGEMENT ISSUES B/21/01 (CERTIL LICENSEE 10 MURDERS/ DOCUMENTATION ITEN DESCRIPTION LICENSEE 10 MURDERS/ DOCUMENTATION Failure to keep Accurate and Complete Haintenance Records Related to Safety Itens Maintenance / Murders/ DOCUMENTATION Failure to keep Accurate and Complete Haintenance Records Related to Safety Itens Maintenance - Staff Inspections focus in part on ability of licensee to keep track, of its maintenance records and priorities of its maintenance, and on continuing auditibility of maintenance records Maintenance Records - ASLB opinion that auditability of records would be improved 11 QC observation hold points were signed off by QC at each hold point Affected Admin/QC Procedures - Poor record keeping practice of long delays in the QC approval; being obtained and noted alter completion of the work Affected Admin/QC Procedures - Job ticket determination of whether work has an effect on nuclear safety MP 1407-1 Rev. 9	Intervention Intervention Intervention Intervention ARTIAL INITIAL DECISION OCCOURAL BACKGROUND AND HAMAGENENT ISSUES 8/27/01 (CERTIFICATION ITEMS) LICENSEE 10 NUMBERS/ DOCUMENTATION LICENSEE 10 NUMBERS/ DOCUMENTATION LICENSEE STATUS Failure to keep Accurate and Complete Haintenance Records Related to Safety Liers Documentation LICENSEE STATUS Failure to keep Accurate and Complete Haintenance Records Related to Safety Liers Naintenance Records Complete - Staff Inspections focus In part on ability of licensee to keep track, of its maintenance records and priorifies of its maintenance, and on continuing auditability of maintenance records Naintenance Records Complete - ASLB opinion that auditability of records would be improved If QC observation hold points were signed off by QC at each hold point Affected Admin/QC Procedures Admin/QC Procedures - Pour record keeping practice of long delays in the QC approval being obtained and noted after completion of the work NP 1407-1 Rev. 9 LIR 5211-02-300 of 12//12/02 COMPLETE	THI-1 RESTART CONVISSION ORDER ANTIAL INITIAL DECISION DOCEDURAL BACKGROUND AND HANAGENENT ISSUES B/27/81 (CERTIFICATION ORDER) ICEN DECISION CERTIFICATION AND HANAGENENT ISSUES B/27/81 (CERTIFICATION ITEMS) ILICENSEE 10 INTEL DESCRIPTION INTEL DESCRIPTION INTEL DESCRIPTION INTEL STATUS INTEL STATUS Failure to keep Accurate and Complete Hainteenance Records Related to Safety ILICENSEE 10 Keep Accurate and Complete Mainteenance Records and priorities of its maintenance records and priorities of its maintenance, and on continuing auditibility of maintenance records Affected

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II. ASLB PAR A. PROC	TIAL INITIAL DECISION EDURAL BACKGROUND AND MANAGEMENT ISSUES	THI-1 RESTA 8/27/81 [CERTIN LICENSLE 10 NUMBERS/ DOCUMENTATION	CONHISSION ORDER FICATION ITENS)	NRR STATUS	Revision 6 Lebruary 8, 1913 REGIUM 2 STATUS
II.H Conditi	ons and Commitments				
C	onditions				
96'	 Prior to restart, licensee demonstrate Category T examinations given to four remaining individuals 	C-25 C-26	LIL 345 Issued	Complete - HRR Hemo of 3/5/82 to ASLE	No inspection required
82-8C 2 53	Prior to restart, the licensee demonstrate that all licensee operators received three days additional training on THI-? accident	c-27	Complete	n/A	IR 82-16 COMPLETE
98	Prior to restart, licensee ', demonstrate that all operators not previo-sly NRC licensed have ' completed an NRC exam at B&W simulator	C-28	Complete	Complete - NRR Hemo of 3/5/82	No inspection required
99	Prior to restart, licensee demonstrate that a CRI part-task simulator, which displays temp- erature and pressure, is available at THI-1 (IE certify)	9A-412019 Training Simulator C-29	Complete	ΝΛ	18 81-33, para 5.a COMPLETC
100	Prior to April 1, 1982, licensee prepare for bids and distribute specifications for a THI-1 exact replica simulator. Hake reasonable- effort to fastall by 1985. (HRR monitor)	87412006 C-34	Lic. Ltr B2-241 10/4/82 (TRII) (Annual Report - Next 10/83) Contract Award 3/83 Installation Fall '85 Comule2a	LTR of 12/22/82 (TRN) - Certified reasonable progress COMPLETE	No inspection required

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	181-	THI-I RESTALT CONVISSION OR				
DECISION	x icclife 0/27/01	(CERTIF!	CATION ITEM	S)		

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Page 28 of 46 Revision 6 Lebraary B, 1983

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ORDER ITTEN	ITEM DESCRIPTION	DOCUMENTATION :	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
6. 101	Prior to restart, licensee demenstrate that a basic principles trainer for 1111-1 is contracted to be installed in 1902 (NRR certify)	BA-412019 C-30	COM STAT 10/6/82 1983 Install. Contract Complete	LTR of 12/22/92 (TRN) COMPLETE	No inspection required
82-8C 7. 03	Prior to restart, licensee demonstrate that members of sentor macagement (since July 1, 1979) who are designated to act as Emergency Directors or Emergency Support Directors, have received a formal training course (IE certify)	Training Records C-23 C-24 C-52	Complete (1/1/83)	II/A	IN 83-02: CONTEN
61-33 8. 03	Licensee conduct training of all operators in ATOG prior to ATOG implementation	Training Records	ATOG Program Need Development (POST RESTART)	Review ATGG Program Issue Lic. Cond.	1R 81-33, para 5.6 01 61-33-03: completion of A106 program/training) POST PESTART
82-80 31 54 103	 a)- At time of restart, staff Impose and enforce license conditions for operation at THI-1 concerning shift manning 	Affected Procedures C-31	Complete (COM STAT 10/6/82	Lic Cond. Issue at Restart	PERDING RRN ACTION
82-BC 10 55 104	a)- c)- At time of restart, licensee provide and maintain a management system to perform certain functions	Various Procedures for review and dissem- ination of operating experience information, mods to oper- ators,med info in training	Complete	ΠĂ	IR 80-19 (80-19-12 CLOSE) FP 81-33 IR 82-09 IR 82-16 IR 82-16 IR 82-16 IR 82-26 IR 83-02: CLOSED OI 80-21-12 CLOSED OI 80-21-12 CLOSED COMPLETE

8. PL	ANT DESIGN PROCEDURES HODIFICATIONS 12/14/	BI (CERCIFI LICENSEE ID NUMBERS/			arction 1 CTATUS
RDER	ITEN DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	NRR STATUS	KULION 1 STATUS
	Natural and forced Circulation				
82-8C 39	Para 628: Install new shield walls between the HPI piping and motor control centers (Certification	BA-412020 (LH-51A) SDD 154A	Rpt to ASLAB of 8/12/82 Complete (Short Term)	NUREG 0680	CONFLICE: IR 62-13 (Restart Issues Identified and Separately Iracled)
105	item)* re: LT-3-2.1.6.b TAP 11.8.2.2 (PART)	ECM-5-230 ECM-5-242 DRF 3956 (Paint)	Accepted 8/2/81 Accepted 9/10/82		
1.8	Detection of Inadequate Core Cooling				
,	Para 673: Install meter to measure reactor vessel water level as Long Term Item (Commission enforcement item)*	TBD	TBD	TBD No Cert. Required (SECY 82-250)	Perform inspections per separate matrix for NUREG-0680, item LT 3-2.1.3.b
1.0	Abnormal Transients Operating Guidelines				
106	Para 721: Staff review revised ATOG	C-55	Completed (COM STAT 10/6/82)	LTR 10/26/82 (TAP)	No inspection required prior to restart
167	(HRR review) (Certification Item)* Re: TAP 1.C.1			Complete	
1.1	Fressurizer Heaters				10.01.01
82-DC 03,06	Para 755: Demonstrate reactor coolant pressure control using HPI system (Certification item)*	TP 664/2 C-10	Complete LTR 5211-82-272 of 12/7/82	N/A	[R 83-01:
14 41					
10	*per Staff Enforcement Plan dated 2/1/82 and ASL8 Order dated 4/5/82.				
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ORDER	ANT DESIGN PROCEDURES NOUTFICKTIONS TEFT	LICENSEE ID NUMBERS/	LICENCEE CTATUR	HER STATUS	REGIOD 1 STATUS
ITCH	ITEN DESCRIPTION	DOCUMENTATION	LILLINGE STATUS		
11.5	Connection of Pressurizer Heaters to Di	esels			
108	Para 771: Staff verify procedures for reconnecting pressurizer heaters (Certification item)*	-	Complete .	Complete « Review per NUREG-0680 #8-2.1.1	No faspection required
83-01 01 109	Para 772: Licensee demonstrate connection of heaters to emergency buses; staff monitor test and evaluate results (Certification item)*	-	-	-	IR 83-01 01 83-01-01 (PET)
11.8	Computer				
82-BC 56	Para 855: OIE staff verify that operators do not rely solely on computer information for making operational decisions	Operating/ Emergency Procedures Operator Observation/	Complete (COH STAT 10/6/82)	NA	19 82-18 COMPLETE
		C-63			
111	Para 867: Install data logging or recording instrument displays of certain in-core temperature infor- mation ('efore 5% power-lic. cond.*) (Back Incore T/C Display System) *per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82	RH-4A	Complete	МА	Inspection per 8-2.1.3.6 (HFT)
	이 그런 아이들이 너무 영향을 줄				
		5 S. Y			

Page 31 01 THI-J RESTART CONNISSION ORDER Revision 7 11. ASLO PARTIAL INITIAL DECISION February B. 1983 (CERTIFICATION ITEMS) B. PLANT DESIGN PROCEDURES MODIFICATIONS 12/14/81 LICENSEE ID HUNHERS/ ORDER REGION 1 STATUS **HRR STATUS** HOLINENTATION LICENSEE STATUS ITEM DESCRIPTION ITEM In-Plant Instrument Ranges 11.1 Inspect per 8-2.1.8.b Para 874-875: Install extended range noble gas effluent monitors. If 112 licensee cannot meet NUREG-0737 conmitment, matter shall be brought promptly to Commission's attention [Certification Item]* Inspect per 0-2.1.8.b Para 882-883: Install expanded sampling ---system capability for monitoring radio-113 todine and particulates (Certification item)* Safety System Status Panel 11.4 Perform inspections per Para 899: Licensee perform complete NUREG-0680, item 2. review of safety system valve lineup. 79-05A-5 Staff perform independent verification Perform inspections per NRC Ltr 4/22/81 ASLAB Rpt of 8/12/82 Para SO4: OIE review licensee compli-:-82-86 TAP I.C.6 - CLOSED Not regulred. Complete ance with NUREG-0737 requirement to 57 IR 82-16 - OPLN (Impleverify by IE (COH STAT 10/6/82) upgrade administrative controls for mentation) **OI** Ready for Review monitoring and verifying system status IR 83-02: CLOSED prior to restart (TAP 1.C.6) COMPLETE Control Room Design-iluman Factors Engineering 11.11 [TAP 1. D. 1] (PART) (TAP 1.0.2) (PART) 18. 82-17 Support from ASLAB Rpt of 8/12/92 82-17 Para 914-915: Licensee perform 6-55 01 82-17-01 Equip ticht HFEB - Complete S.T. - 10/1/82 HUREG 0752 recommended corrections, OIE 01 Surv. 11 - IBD (SECY 82-384) Complete and iluman Factors Safety staff review 01 81-33-02 CLOSED **HUREG 0752** modifications against criteria of 01 EST 2/83 EST 3/83 HUREG-0752 and its Supplement 1 116 (Certification item)* *per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82

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ACLA DADTIAL INITIAL DECISION		THS-1 RESTAR	CONVISSION ORDER			Page 32 of 46
B. PLANT DESIGN PROCEDURES MODIFICATION	IS 12/14/	81 (CERTIF) LICENSEE ID NIMMERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS		Echanory 8, 1983 © MIG100 1 STATUS
1 1100 COMPTTON						
82-20 Human Factor Engineering 58 (Nos. 1, 3, 4, 5, 6, 7, 8, 10	0)	(PH-10) SOD-611 A/B/C/D ECH-S-238 ECI1-205/ETC.	Accepted			IR 82-17, Selected Hod Review IR 82-26 TEST REVIEW COMPLETE
		ECH-S-291 ECH-S-268 ECH-S-287 ECH-S-297	Accepted Accepted Accepted Accepted			
		ECM-S-300 ECM-S-225/113 TP 250/1, 2 TP 250/2.1	Accepted Accepted Completed Completed			
82-BC - Remote shutdown communication 01,04 area lighting (No. 9) 58	n and	(PM-11) SDD-650 ECH-S-276 TP 250/2	Accepted Complete			IR 82-17, Selected Hod Review IR 82-26 TEST REVIEW, COMPLETE
82-BC Comp. Mod. HI SPD Printers an S8 CRT Display) (No. 2)	nd	(RI1-7) SDD 602A ECM-S-013 ECM-S-024 ECM-S-020 ECM-S-254 ECM-S-256 DRF 5145 TP 250/2	Accepted Accepted Accepted (Not Restart2G		,	IR 82-17, Selected Hod Review IR 82-26 TEST REVIEW COMPLETE
	1	SP (vartous)	Comprete			
Install in-core thermocouple backup display system LT-3-2.1.3.b TAP 11.F.2 (PART) (sched extended SECY 81-528A Prior to 51 PWR per Staff 2/ license condition and ASLB 0	() (1/82)rder	-				Inspection per L1-3-2.1.1.
4/5/82	4					

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II." ASLB A	PARTIAL INITIAL DECISION ANT DESIGN PROCEDURES MODIFICATIONS 12/1	TMI-1 RESTAR	COMMISSION ORDER		Page 33 of 46 Revision 7 February 8, 1903
DRDER	ITEM DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
	Two sonic flow devices on each . EFW Supply Line	``			Inspection per 8-2.1.7.b
82-8C 01,04 36	Hods to increase ICS power supply reliability - loss of PWR Ind./Ann. re: LT-1	BA-412028 (LH-43A) SOD-621A ECH-S-177 HTX 132.5.1 TP 250/2.1,2,2.2 TP 250/1.1	Accepted 9/14/82 Complete Complete	NUREG 0752	4R 81-24 Installation Records IR 82-19 HOD REVIEW IR 82-26 IEST REVIEW COMPLETE
1.0	Additional LOCA Analysis		COM STAT 10/6/82		
82-8C 01,04	Para 943: Install HPI system cavitating venturis (Certification item)*	BA-412072 (RN-14) SDD-211A ECH-3-007	Accepted 12/11/81		IR 81-19, para 4.c OI 81-19-XX: Draft test procedure IP 651 to be issued IR 82-07, IP 655/1
117		TP 655/1 TP 250/1.1, 1.2 TP 250/2.1, 2 TP 250/3.1, 3.2 TP 250/4.1, 4.2 TP 250/5	Issued - HFT Complete Complete Complete Complete Complete		TECH REVIEW IR 82-10, Mod. review IR 82-26 TEST REVIEW EXCEPT TP 655/1 COMPLETE EXCEPT TEST (NET)

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*per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82

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		THI-1 REST	ART CONVISSION ORDER		Page 34 of 46 Revision 7	
I. ASLO P B. PL	ARTIAL INITIAL DECISION ANT DESIGN PROCEDURES HODIFICATIONS 12/14	LICENSEE ID	(CERTIFICATION PTEMS)		February 8, 1983	
RDER TEM	ITEM DESCRIPTION	DOCULEIITATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS	
1.P	Systems Classification and Interaction					
82-8C 59	Para 1001: Upgrade pressurizer level instrumentation by providing redundant vital power supplies (prior to 5% power (License condition)*		ASLAB Rpt of 8/12/82 Est. 9/1/62 Complete (CON STAT 10/6/82) (Original Desig)	NA - License Condition Ho Longer Needed	IN 82-26 - COMPLETE	
1.9 "	Emergency Feedwater Reliability	· · · ·				
83-BC 06	Para 1036: Provide safety grade auto initiation of EFW Flow Control + (Long Term)		Engineering Ltr 5230-02-150 7/7/82 to FM seismic review - cycle 6 Ref. (EF)	HA	No inspection prior to restart	
	Para 1037: Provide following long- term modifications to improve LFW system reliability:					
82-8C 01, 04 83-8C 16	1. Cavitating venturis in EFW lines re: TAP II.E.1.2	BA-412024 (LM-13A/B) SDD-424B ECH-S-280 ECM-S-303 DRF 5168 MTX 85.5.5 TP 233/3 TP 250/4.1 TP 250/1, 1.1 TP 250/2 C-2	Rpt to ASLAB 8/12/82 COMP. EXCEPT 1EST Accepted 6/21/82 Accepted 11/15/82 Accepted 11/15/82 Hritten Not App. Complete Complete Complete TSCR 103 issued	AHD. 78 1ssued 10/20/82	IR 83-01: Mcd Review CONPLETE (EXCEPT HFT) IR 62-26, TP 250/4.1. and 1,2	
	*per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82					
	<pre>*prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASLB Order dated 4/5/82</pre>		:			
	not required by NRC staff per LTR to ASLB 6/10/81					

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TMI-1 RESTART CONHISSION ORDER Revision 7 11. ASLB PARTIAL INITIAL DECISION February 8, 1983 (CERTIFICATION ITEMS) B. PLANT DESIGN PROCEDURES MODIFICATIONS 12/14/81 LICENSEE ID NUMBERS/ REGION I STATUS ORDER HRR STATUS DOCUMENTATION LICENSEE STATUS ITEH DESCRIPTION ITEM No inspections prior to Engineering 83-9C 2. Safety grade condensate storage restart tank low-low level alarm+ 07 No inspections prior to TBD 83-BC 3. Safety-grade steam generator restart high level alarm 13 No inspection required See 11064 below BA-412155 03-BC 4. Safety-grade isolation of main prior to restart S00-T80 feedwater on overfill of an **NR** ECH-TGD affected steam generator* Test-TBD No inspection required See below Ltr 5211-82-153 of BA-412024 83-BC 5. Upgrade Hain Steam Rupture prior to restart 8/2/82 proposed (180) Detection System to safety grade+ 09 delction of system **SDD-TBD** for EFW ECH-Test-TBD Review as Restart Hod. LTR 11/10/82 (EF) See 11.0 #1 Ltr 5211-82-153 of Para 1064: Lic asee propose means for . IR 83-31: COMPLETE 83-80 8/2/82 (EF) Cavitating LIC LTR SAT. preventing feedwater isolation due to . aboye 10 Venturies for EFM System MOD BEF. RST failure in rupture detection system Proposal Complete -(HRR review) (Certification item -C-6. 54 180 Implementation reasonable progress)* Board Questions 11.5 Para 1132 MUREG 0694 Items before restart No inspection required Complete NRC Complete -- Evaluation of Organization Ltr 4/22/81 and Hanagement Improvements 121 Safely Evaluation (IAP 1.5.1.2) +prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASLB Order dated 4/5/82

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*per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82

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Page 36 THI-1 RESTART COMMISSION ORDER Revision 7 February 8, 1983 11. ASLB PARTIAL INITIAL DECISION (CERTIFICATION ITEMS) B. PLANT DESIGN PROCEDURES NODIFICATIONS 12/14/81 LICENSEE 10 MINBERS/ REGION I STATUS . NER STATUS **R**1030 DOCUMENTATION LICENSEE STATUS ITEM DESCRIPTION ITEM IR 82-16 Complete - NRC Complete 6/1/82 LPP -- NSSS Vendor Review of Procedures COMPLETE Ltr 4/22/81 12/2 (TAP 1.C.7) 82-86 PAP 60 Emerg. Proc. Inspection per HUREG 0752 Issued 957 Complete PID 11.11 of 12/14/81 Control Ruom Design Review HUREG-U737 Suppl 1 ---LT - T8D (TAP 1.0.1) issued 12/82 (re: SECY 82-111 & 82-384) IR 81-33 Records and Ccaplete - NRC Ltr Expected during Training Plans Pending LIC. Training during low power testing 4/22/81 81-33 PWR Physics Testing Records Review 108 - for Compl. (TAP 1.G.1) 04 TSCR 108 (COMPLETE -234 01 81-33-04 - Implement (Pf1) LIC. COND. COH STAT 10/6/82) (PET) NRC review restart lest specification -- Lic. complete program less than SI PWR (Staff Enf. Plan 2/1/82 and ASLB Order 4/5/82 No Inspection required Complete - NRC Pilot Honitoring of Selected Complete Ltr 4/22/81 Emergency Procedures for (re: 1.C.7) 124 NIOLS (TAP 1.C.8) Equipment Qualification 11.1 Inspection Complete for ESI HRC Hemo 6/25/82 Further Inspectice Pending Para 1162: Staff certify to Commission **Commission Action** 63-BC LIC/HRR Action of Long lerm a report on licensee's compliance with on 6/24/82 11 CLI-80-21 with respect to radiation Suspends 6/30/82 date (II) items levels at THI-2 (NRR review) pending final rule 28 (Certification item)* issuance (proposed 2nd refueling after 6 3/31/82) MRC LIR 12/10/82 Safety Evaluation Complete for RST -11 Items Rpt to Coom. ? *per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82

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Page 37 TMI-1 RESTART COMMISSION ORDER Revision 7 IL. ASLA PARTIAL INITIAL DECISION February B, 1983 (CERTIFICATION ITEMS) PLANT DESIGN PROCEDURES HODIFICATIONS 12/01/81 8 LICENSEE ID NUMBERS/ ORDER REGION I STATUS HRR STATUS DOCUMENTATION LICENSEE STATUS ITEN DESCRIPTION ITEM Partially Complete LTR 10/8/82 Complete - Response C-62 Para 1163 and 1168: Board reguires 83-BC COMPLETE? Submitted LTR that restart be subject to the 12 LIC. COND. ? of 3/24/82 following specific conditions: (EXCPT 14) IR 83-02 COMPLETE Ethylene Pronvlene See above 1. Replace materials with a (10 yrs) replaced qualified life of 1.5 years prior: Neopreme (1.5 yrs) to restart HRR review replacement . to be completed of materials. IE verify replacement) (Certification item)* Complete 18 83-02 COMFLETE See above Formalize Procedure 2. Prior to criticality, put into AP 1027 & other place a maintenance and replace-Track System ment program that will assure all : materials with a qualified life of Complete less than 40 years will be replaced when needed. (NRR review) (Certification item)* IR 83-02 COMPLETE Proc. 7231-WHP-See above Consider aging of the materials 6470.0 during the period prior to instal1 . Complete lation, during plant operation, and during the periods that plant' . is not operating in establishing . the material replacement schedules. (NRR review) (Certification item)* ... IR H3-02 COMPLETE **Results** in Schedule See above 83 BC 4. Complete the aging evaluations for #2 above for the equipment still to be 14 evaluated prior to exceeding 5% power operation and factor the results into the replacement program, if required. (NRR review replacement of materials. If verify replacement) (License conditions)* *per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82

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II. ASLB I B. P	PARTIAL INITIAL DECISION LANT DESIGN PROCEDURES MODIFICATIONS 12,14	THI-1 REST/	ART COMMISSION ORDER IFICATION ITEMS)		Page 38 of 46 Revision 7 February 8, 1983	
ORDER	ITEM DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION I STATUS	
	5. Applicability of test data for Foxboro Pressure Transmitter to THI-1. (NRR review) (License condition)*		re: LTR 6/12/8: Satisfactory Evaluation	See above	IR 83-02 CONPLEN.	
	 Applicability of test data for Qimitorque Motors to TMI-1 (NRR review) (License condition)* 		re: LTR 10/6/81 Evaluation Satisfactory	Sce above	IR 83-02 CORACTE	
127	Para 1174: Staff perform an indepen- dent review of licensee's calculations of flood level in the reactor building. Staff conduct review of operational limitations that must be imposed on licensee to ensure reactor building flood level does not exceed licensee's calculated maximum flood level.	BA-12002 (LH-9) SDD-629A ECH-S-014 HTX 152.5.4 TP 664/2 C-58	Complete 10/6-82 - Complete Accepted 9/18/31 Complete Ltr 5211-82-145 6/11/82	Review Ltr 145 NRC Ltr 7/26/82 Fluod Calc. (PLT) 1D other locations Est. 1/83	 IR d1-28, para 8.b. F.C. IP 664/2 and test results. IE 82-03, Nod Peview 01 82-03-01 CLOSEP IR 82-07: para 6.b HOD REVIEW 01 82-07-02 thru PE-CLOSED IR 82-26 01s COMPLENE Add'1. Tufe Peg. 	
		BA-12002 (RH-8) SDD-629A ECM-5-029 ECM-5-010 ECH-159 MTX 152.5.1 TP 657/1 WAN 15, R4	Accepted 8/7/81 Accepted 8/7/81 Accepted 8/7/81 Complete		<pre>IR 82-03, para 4: 140 REVIEW 01 82-03-01 Closed IR 82-06, para 2: 11em (Installation acceptable) IR 82-19, IP 65771 IRL COMPLETE</pre>	
12	Para 1180: Licensee environmentally qualify a single path to cold shutdown or bring the matter to the attention of the Commission. (NRR review) (CERT ITEM)	C-61	Complete	Complete - Staff Report of 1/28/R2 (Not Required)	No inspection required	
	*per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82					

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1. ASLD - 0. 1	PARTIAL INITIAL DECISION PLANT DESIGN PROCEDURES MODIFICATIONS 12/14/	TMI-1 REST/ 81 (CERT) LICENSEE ID	NET CONVISSION ORDER SEICATION ITEMS)	•	Pag. 39 of 46 Revision 7 February 8, 1983	
IDER ICH	ITEN DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION I STATUS	
	Commitments, Requirements, Conditions and Implementation	1				
	Para 1217: NRC staff report to the Board the details of its enforcement plan within 45 Jays of the service of the initial decision. (NRC Staff Enforcement Plan dated 2/1/82 submitted to ASLB) plan	C-14	Complete	Review Submittals Issue LIC. Cond.	Perform inspections as ap opriate to verify compliance with HRC staff enforcement plan Sample review TSA's per Order #2-79-058-7	
	Para 1220: Restart conditioned upon completion of <u>short-term</u> items of August 9, 1979, Order, HUREG-0660, NUREG-0694, NUREG-0737, and any additional items found by the Board to be necessary and sufficient.		Various per each item herein	Various per cach item herein	Perform inspections as appropriate per separate items	

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II. ASLB PARTIAL INITIAL GECISION C. SEPARATION OF THI-1 AND THI-2 12/14/81		THI-1 RESTA (CERT) LICENSEE ID	RT COMMISSION ORDER FICATION ITEMS)		Page 40 of 46 Revision 6 February 8, 1983	
OPDER ITCH	I EN DESCRIPTION	DOCUMENTATION	LICENSEE STAFUS	NRR STATUS	ACGION 1 STATUS	
111.0.1	Short-Term Action Item 4 and Board Question 9 - Decontamination and Restorat of Unit 2	<u>ton</u> -		in the second		
82-BC 61	Para 1256: During any Unit 2 fuel movements in the fuel handling building, licensee shall suspend work in the Unit 1 area of that building (unless specific license conditions are met).	TH1-1/TH1-2 Procedures	Complete for Restart	Issue iIC. COND.	Inspection IMI-1 Control prior to restart (inspect procedures prior to Unit 2 fuel movement)	
	After the restart of Unit 1 and prior- to the movement within the Unit 1 fuel handling building of any irradiated Unit 1 fuel. Itcensee shall install, and have operable, an ESF filtration system for the fuel handling building. The ESF filtration system for Unit 1 shall be operable whenever irradiated Unit 1 fuel is moved within the Unit 1 fuel handling building (License conditions)*			Issue LIC. COMB.	Perform inspections per MUREG-0680, item 4	
82-8C 62	Para 1267: Prior to restart the licensee shall submit to the staff a program designed to test the adequacy of its phase 1 ventilation separation program such that staff can include in its certification to the Commission that a satisfactory test program has been implemented (NRR review) (Certification item)*	SP(TBD) NTX 104.5.1 TP 250/2.1 C-44	LTR of 9/29/82 Test Results Summary	Review submittal (THIPO as of 10/22/82) EST 2/83	No further inspection required	
	*per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82	:			•	

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11. ASLB I C. SI ORDER ITEM	PARTIAL INITIAL DECISION EPARATION OF THI-1 AND THI-2 \$2/14/81	THI-1 RESTAN (CERTI) LICENSEE IQ NUMBERS/ DOCUMENTATION	ET CONVILSSION ORDER FIL. "TON ITEMS)	NRR STATUS	Revision 6 february 0, 1983 PEGION 1 STATUS
111.8.2 82-8C 63 131	Short-Term Action Item 5 Para 1303: Unit 1 solid waste handling capabilities shall not be relied upon for decontamination or restoration of Unit 2 (License condition)*	Affected TMI-1/TMI-2 Procedures	Unit 1 Scope Complete Rely on LIC. COND.	Issue LIC. COND.	Pending LIC. COUD. 15501
82-DC 64	Board Questions 9 - Ground Water Monito Para 1315 & 1326: Measures currently in place to monitor radioactivity in oroundwater to facilitate identi- fication and elimination of any IMI-generated sources of contamination shall continue until the staff determines that they are no longer required (NRR review/IMIPO monitor program) (THIPO follow/enforcement item)*	THI-1/Tili-2 Procedure	Complete (Unit 1 Scope) Resolve Ol	No cert required (SECY 82-250)	TR 82-21 REMAINS OPEN
	*per Staff Enforcement Plan dated 2/1/82 and ASLD Order dated 4/5/82				

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11. ASLB PARTIAL INITIAL DECISION D. EMERGENCY PLANNING ISSUES 12/14/01		THI-1 RESTA (CERTI LICENSEE ID	RT COMMISSION ORDER FICATION ITEMS)		Page 42 e.5 46 Revision 6 February 8, 1983		
ORDER ITEM	· ITEM DESCRIPTION	DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS		
D. EMERGENCY P	LANNING						
· IV.L Par sat	a. 2010: Following shall be Isfled prior to restart						
82-BC ». 74 131	Qualified ESD at EOF in interim to full off-site staffing (1 1396)	C-42	Licensee Appealed Revise Procedure ASLAB Favorable to Licensee COMPLSIE (Implementing 1 NR, however)	Staff appealed to Conmission	ASLAR 698 of 10/22/82 Decision (Reversed Pending Certain Conditions) Est ?		
82-80 b. 65 132	Staff review changes to 5 risk county brochures and PERA phamplet to assure no change of intent (1 1156) Advise Commission		Complete (COH SIAT 10/6/82)	NA	IE: Advise Commission FEMA to PEMA LTR FEMA LTR - EST 4/83		
82-BC c. 13 8	Updated PEHA and 5 risk county brochures be distributed (Public . Information on Emergency Preparedness (11537)	C-66	Complete (COH STAT 10/6/82)	NA	IE: FEMA LTR Needed EST 4/83		
82-86 d. 67 13954	Updated county brochures distributed to transient (hotels, motels, parks, employers) location (1 1545) Board Suggestions: Placards at prominent places (11545)	C-67	COM STAT 1/5/83 COMPLETE McKelvy to Kantor Ltr of 11/16/82	на	IE: EST 4/83		
82-86 e. 68 1345	At least be underway for licensee briefings to major employers and operators of transient locations (with PEMA, county, C of C assistance (1 1545)	C-67	COM STAT 1/5/83 COMPLETE HcKelvy to Kantor Hemo of 12/8/82	HA	IE: EST 4/33		
1356	Siren System audibility test Staff to certify results to NRC and need for supplemental alerting (1 1566)	C-39 :	Ltr L82-116 of 5/21/82 COMPLETE	NA .	SE: FEHA HENO OF 10/6/82 Acceptable as Interim Use EST ?		

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I. ASLB PART D. EMERGI		TIAL INITIAL DECISION GENCY PLANNING ISSUES 12/14/81		THI-1 RESTART COMMISSION ORDER (CERTIFICATION ITEMS)			Page 43 of 46 Revision 6 February 8, 1983
RUER TEM		ITEN DESCRIPTION	•••	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION I STATUS
82-8C 70	9. 7	Communications Drill to Stress the system (1 1756)		c-41	COMPLETE (Ltr L82-050)	RA	IE: MERO of 6/28/82 Pagano to Stolz Apparently Net Est 4/83
82-8C	h. 8	Staff certify to NRC when plans for EP-Z school districts are completed and reviewed for adequacy (§ 1542) Advise timing	• •	C-40	Assistance Complete	NA	IE: Advise Complision FEMA LTR Needed EST 4/83
82-BC 72	Par a.	a. 2011 Board Suggestions Hass care Emerg. Responsibilities for certain districts in York County (Sect. IV.H.1)			TBD - Assist IC As Necessary	MA	IE: To obtain Licensee Position/Action Est. 4/83
	b.	Commission direct staff to notify it of KI distribution less than one-year of restart					
	٤.	Municipality plans for disabled, traffic control, idencifying need to county	ls .				
	d.	Commission direct staif to report resolution of FEMA identified deficiencies in state, county loc plans	al				

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. ASLB P E. RE	ARTIAL INITIAL DECISION OPENED PROCEEDING ON CHEATING 7/14/82	THI-1 RESTART CONVISSION ORDER (CERTIFICATION ITEMS)			Page 44 of 46 Revision 6 February 8, 1983
DER CM	ITEN DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
82-BC 75	Para 2411 & 2419 (3) Board Imposition of Honetary Penalty - failure to safeguard integrity of exam process, instill attitude of respect, assure quality of training instruction, negligence in cert process of candidates (B 2071, 2084, 2086) Staff issue if Board cannot	Bef. Comm. of 8/20/82	llo plans to riject	NA	C1.1-82-31 of 10/14/87 OIE to Review
	Para 2414 & 2419 (1) 6 & H suspension without pay or liceuse modification (12020 & 2021)	NA.	Bef. Comm. 8/20/82 two week suspension completed 8/17/82 (REH-CHI)	NA	IR 82-19: COMPLETE (In conjunction with 82-RC-80)
82-BC 76	Para 2419 (2) Staff investigate B/3/79 Certification of VV to NRC for Lic, renewal LIC, preserves records until Order by Board, Appeal Soard, Commission (8 2312-14, 2319, 2048, 2059)	LTR of 1/31/83 5211-83-033	LIC INVEST. Complete	NA	CL1-82-31 of 10/14/82 Office of Investigation to Review
63-8C 15	Para 2(21 (1) Condition of Restart - Two year probation period of Lic. qual & requa ¹ . test/training program (12068)	Bef. Comm of 8/20/82 (REH-CHT) LIC LTR of 10/1/82 (TRN)	Data - Design Lab independent review review initiated DDL. Vol. 1 Submitted	ODL asked to be independent NRR team Review LTR	Pending NRR review for further action SALP: Training Bodules to be part of Basic Inspection Program
82-BC 77	Para 2421 (2) Condition of Restart - LIC establish criteria for	Bef. Coun of 8/20/82	Complete	EST 2/83	Post Restart Implementation Review
139	(12068 and 2168)	(REII-CHT) LIC LTR 10/1/82 (TRN)	DDL. Vol. Submitted	Review LTR EST 12/82 PA Gefore ASLAB of 12/13/82	
				to NRR (REH-QAC)	

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82-BC 78	Para 2421 (3) Condition of Restart - LIC establish audit procedure for unscheduled and undelegated Hanager of Training: Supervisor Operator Training direct observations of training/test program (12068 and 2168)	Bef. Comm of 8/20/82	Complete .	NA .	IR 83-02 COMPLETE
82-BC 79	Para 2421 (4) Condition of Restart - LIC develop procedure for route sampling and review of exam results for evidence of cheating (12331) Staff approve process (12331)	Bef. Comm of 8/20/82	By 9/24/82 Proc. to be submitted to NRR Complete 1/1/83	Review procedure Est. 2/83	Post Restart Implementation Review
82-80 80	Para 2421 (5) Condition of Restart - Until order, any participation of GPM in start-up and test at TMI-1 is to be directly supervised by qualified official of GPUNC (12049)	Bef. Comm of 8/20/82 (REH-CHT)	Supervision initiated and before 10;1 GPH transfer to non-nuclear activities (COM STAT 10/6/82) 10/1/82 GPH Transferred	NA .	IR 82-19: COMPLETE

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II.	-									

		IMI-1 A	IMI-1 RESTART CONVISSION DRDER (RESTART/POST RESTART ITEMS) Page AI of 13 LICENSEE ID NUMBERS/ DOCUMENTATION Restart February 8, 1983 BA-412087 LIR:TIL-680 1/23/81 Lic Part. Review Design SECY 82-475 Develowent Phase Inspection requirements dependent on MRR review and evaluation			
I. HUREG O THII-1 R ORDER ITEM	ITEM DESCRIPTION	LICENSEE ID NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	February 8, 1983 REGION 1 STATUS	•••
79-80-050 Long Term 1	Auto RCP trip					
	Provide automatic trip pending •NRR review of proposed design (TAP 11.K.3.5)	BA-412087	LTR:TIL-680 1/23/81 Lic Part. B&4 Generic Activity (Confirmed SECY 82-384)	Review Design SECY 82-475 Development Phase complete - Implemen- tation as Heltiplant Item	Inspection requirements dependent on NRR review and evaluation	
Long Term ((LT-1 to 4)					
LT-1 (TAP 11.K.)	ICS FHEA 2.9)					
82-8C 36	Hodify electrical distribution systems to ICS	BA-412029 (RH-17) 3D0-735A ECM-S-123 HTX 274.5.1 TP 250/2.1 TP 250/2	Accepted 11/18/81 Complete Complete	Complete - NUREG 0680	IR 81-22, para 5.b: Design/installation records (5-123) IR 81-24, para 4: Installation records (S-123) IR 82-15; Mod. Review IR 82-26 TEST REVIEW COMPLETE	•
83-BC 04	Investigate other modifications to increase ICS power supply reliability (TAP II.K.2.9 Close	d)			Per 11.8. P10 11.8	
82-BC 01,04 37	Install remote shutdown panel (Also see Bulletin 79-27)		-	-	Inspection per 11.8 PID 11.N	-
83-8C 04	Upgradc ICS/I:NI - Long Term (licensee action not required prior to restart) TAP 11.K.2.9 - Closed	6A-412295	- i	Complete - NRC LTR 8/2/82, Apalysis Transfered to USI-47	IR 82-74 CLOSED	

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I. NUREG 0600 1111-1 RESTART EVALUATION REPORT URDER		IRESTAN		Revision 6	
		LICENSEE ID NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
-2 Small break analysis AP (1.K.3, .30 and .31)					
SB LOCA Hodel		LTR 5211-82-198 of 8/16/82 Hodel Program	Additional Details Sched. Coming (SECY 82-384 Confirmed)	Review	inspection pending NRR Review .
SB LOCA Plant Specifics	•	LTR 5211-82-134 6/9/82	Less than 1 year after Hodel approval	Review	Inspection pending LPR Review
T-3 Lessons learned HUREG-0578 Category B Items		·	-	Complete - Progress Hade	Per listed items
1.2 Relief valve testing TAP 11.D.1.2 & .3)				•	
Safety Helief, Block Valve D. (schedule extended by SECY 81-491)	ata	C-56 Ltr 5211-82-134 6/9/82 ttr 82-076 4/16/82 Ltr 5211-82-165 7/12/82 L1R 5211-82-261 10/28/82 LTR 5211-82-257 12/3/02	SECY 82-384 (RP) BEF. RST) Industry Generic Schedules Discharge Pipe Analysis Results 10/82 Schedule 10/82 Ring Setting Corrected Final Submittal	Review Submittals	Inspection pending NRR review

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I. NUREG 0680 Tili-1 RESTA	RT EVALUATION REPORT	TMI-4 RE (RESTAN	START COMMISSION ORDER		Page <u>A3</u> of <u>13</u> Revision 6 February 8, 1963
ORDER	ITEN DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	tirr status	REGION 1 STATUS
2.1.3.b llew	instrumentation				
(INP 1(.7.2) 	Install reactor vessel water level instrument (See PID of 12/14/81 %o. 11.8 % 673 Long Term) SECY 81-582A, Sched Extended SECY 32-384, TBD date	BA-412023 SDD-221 £CM-TBD Test-TBD	Position Needed TBD	Unacceptable Design NPC Ltr 1/6/82 No Cert. required (SECY 82-250) NRC Order of 12/10/82 (TSA) DSK Rpt 3/10/83 Schedule Procedure Submittal	Pending Commission Decision/Licensee Position Pending NRR Review
82-BC 38	Install in-core thermocouple backup display system (by 1/1/82 per TAP 11.F.2; schedule extended by SECY 81-582A)(Prior to 5% power per staff 2/1/82 license condition and ASLB Order dated 4/5/82)	BA 412056 (RH-4B) SOD-625B DRF 1133/ETC. TP 250/1, 2 TP 346/2 TP 846/1	Accepted 12/15/82 Complete PWR Test LIC LTR 82-007 of 2/2/82-Design Submitted	MUREG 0752 Evaluate Design Issue Lic. Cond.	IR 82-17 Hod Review to be completed after Lic. 1/0 IR 82-19 TP 846/1 PROC. IR 82-26 TP 346/2 PEGC. PENDING NRR REVIEW (Limited Review Before Restart) IR 83-02 TP 250/182 TRE
2.1.5.0 Der (1AP 11.E.4.1)	dicated hydrogen penetrations				
80-04 05	<pre>% Penetrations per design % % % % % % % % % % % % % % % % % % %</pre>	BA-412043 (RH-12) SDD-901A ECH-S-199 ECH-S-270	Rpt to ASLAS of 8/12/82 Complete (installation) (SECY 82-384 Confirmed) Accepted Accepted 6/22/82	Complete NUREG 0680 Supp 3	IR 80-04, para 8 01 80-04-05 IR 80-06, para 10: Welding/NDE procedures; QC review

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		IHI-I RE (HESTAN	SIANT CONNESSION ORDER		Page M of 13 Revision 6
I'III -I	0680 RESTART EVALUATION REPORT				February 8, 1983
MENT R	ITEN DESCRIPTION	LILLENSEL IN NUIBERS/ DOCUMENTATION	LICENSEE STATUS .	HAR STATUS	REGION 1 STATUS
	Install parallel manual isolation valves re: 27-9-2.1.5.f do at same time for ECM 072 & 180 (below)	ECH 065 ECH 065 ECH-S-073 ECH-S-085 ECH-S-085 ECH-S-180 C-16 RIX 285.5.1 TP 243/1 TP 243/1 TP 250/1.2 TP 250/1.2 TP 250/4.1-5 SP 1363-11 18	Accepted Accepted Accepted 9/3/62 1/0 35CR.109 1ssued Complete Complete Complete Complete Complete Complete	Ruview ISCR (re 1SCR 116)	IR 80-09, para 6: QC surveillance report IR 80-17. para 5: Civil/structural work; QC records IR 82-06, para 7.c.(2): TP 243/1 PROC. technical adequacy IR 82-26 IEST REVIEW 01 (2nd Recombiner)
2.1.5.0	Instal' Recombiners				
82-56 11 82-86 04	Pervanent intallation of one recombiner re: TAP 11.E.4.1 (see above)	BA-412042 (BH-12) ECH-5-072 ECH-5-180	Accepted 1/0 Rph to ASLAB B/12/82 994. complete	Complete NUREG 0680 Supp. 3	Do with IT-J-2.1.5.a IR 80-04: para 8 01 80-04-05 CL05FD IR 80-06, para 10 IR 80-09, para 6 IR 80-17, para 7 and IP 243/1 Tech. Adeq.
2.1.6.4	Integrity of Systems Outside Containme	<u>nt</u>			
80-22 99	Leakage Reduction Program (License condition per Staff Enforcement Plan dated 2/1/82 and ASLB Order dated 4/5/82)	5	Write Proc. (12/1/82) Conduct Test Data Evaluate	Results of data obtained from initial seak rate testing will be evaluated and docu- mented in a NRR Technical Evaluation Report LIC. COND. per Enf. Pla	01-80-22-99 Verify lapl. (FEI)

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THI-1 RE ORDER ' LIEM	ITEM DESCRIPTION	· · ·	LICENSEE ID NUHBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION I STATUS
2.1.6.b TIAP 11.8.2.	Plant shielding 2)					
			LIC LTR LIL 216, 8/10/81	SECY 82-384 1st Ref. Aft. RST	NUREG 0680 Supp 3 Design Details by 1/1/82 SECY-384A of 12/6/82 Safe Interim Ops Comm. Approval of ist Ref. after RST (LTR 1/13/83)	IR 82-13; TAP LEFT OPLA OI 82-13-01 & O2 CLOSED OI 82-13-03 PST RST COMPLETE FOR RST
	Hodify post accident sampling system per design review of 8-2.1.8.a (see LT 3-2.1.8.a)		TBD	18D ,	TBD	Pending NRR Review
	Hodify makeup and purification system seal injection filter bypass valves	•	BA-TBD SDD-TBD ECN-TBD Test-TBD		See above (SECY 384A)	Pending NRR Levier
	Hodify decay heat removal system valves		BA-TBD SDD-TBD ECH-TBD Test-TBD	Ltr 5211-82-109 5/21/82 Requested cycle 6 Ref. due to Procurement Problems Ltr 5211-82-144, 6/15/82 Same as above	See above (SECY 384A)	Pending NPR Review

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Mill JULY JULY <th< th=""><th>I. HINEG DEBD IMJ-T RESTART EVALUATION REPORT</th><th>LICENSEE ID</th><th></th><th></th><th>Revision 6 february 8, 1983</th></th<>	I. HINEG DEBD IMJ-T RESTART EVALUATION REPORT	LICENSEE ID			Revision 6 february 8, 1983
International and flow indicational states/ face State 434, 1573 State 434, 1573 (a) 11, 11, 13 Fording and Karlow (a) 100, 11, 13, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 13 (b) 11, 11, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 13 (b) 11, 11, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 13 (b) 11, 11, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 13 (b) 11, 11, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 13 (b) 11, 11, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 13 (b) 11, 11, 13 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 14 (b) 11, 11, 14 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 14 (b) 11, 11, 14 Fording and Karlow (b) 11, 11, 13 (b) 11, 11, 14 (b) 11, 11, 14 Fording and Karlow (b) 11, 11, 14 (b) 11, 11, 14 (b) 11, 11, 14 Fording and Karlow (b) 11, 11, 14 (b) 11, 11, 14 (b) 11, 11 Fording and Karlow (b) 11, 11, 14 (b) 11, 11, 14 (b) 11, 11 Fording and Karlow (b) 11, 11, 14 (b) 11, 11 (b) 11, 11 Fording and Karlow (c) 11, 11, 14 (c) 11, 11 (c) 11, 14	INCH ITCH DESCRIPTION	DOCUMENTATION	LICEMSEE STATUS	HAR STATUS	REGION I STATUS .
Truth Line Contact and Line	2.1.7.a EfW initiation and flow indication Safety [IAP 11.6.1.2]	Grade	56CY 82-384 (Upgrade 1st Ref. Ait. 851)		
UP 11.1.1.1 UP 11.1.1.1 0.9.4 - Jastell Remodent Carted 0.4124, 17.521.62-105 Replete for Reservent Replete for Rese	Provide safety grade auto initiation of EFW pumps" (by 7/1/81 per IAP 11.E.1.2) re: ORDR 1a-3	6A-412024 (RH-13E) (Cert. Hod)	Rpt to ASLAM of 8/12/82 Complete	NUREG 0680 Supp. 3 requires final design before installation	Pending NRR Review 1f changes needed (see ORDR la-3)
03-td - Install Redundant Control (h-1120 ³⁴) Engleteering Complete for start (h-1120 ³⁴) 03 - and Block Valvee' 11,*211:-82-109 Experient Experient Engerting Experient Engleteering 1,*211:-82-109 - And Jwo 0156 level auto start - And Jwo 155 level auto start - And Jwo 156 level	(1.1.3.11 ANI)				
	03-BC install Redundant Control 03 and Block Valve*	84-412034 (180) Ltr 5211-82-109 5/21/82*	Engineering	Complete for Restart NUREG 0680 Supp 3 requires final design before installation	No inspection prior to restart and Pending NRR Review
82-6C - Install safety grade OTSG level M-412012 (M-130) Supp 3 above this Item 18 83-02 TP 250/1 TR Pending MBR review 00 instrumentation Sup-436 (M-130) Kccepted M-412012 (M-130) Supp 3 above this Item 18 83-02 TP 250/1 TR Pending MBR review 11 12.5.2 Kccepted Mccepted Mccepted Mccepted 11 12.5.3 Ccepted Mccepted Mccepted Mccepted 11 12.5.4 Ccepted M/4/82 Mccepted Mccepted 11 250/1,2 Complete prior to startup following Fissued Supp 3 above this Item R 8.0-07 12 Complete prior to startup following Fissued Supp 3 above this Item Mccepted 13 Mated 4/5/92 Mated 4/5/92 Mccepted Mccepted Mccepted 14 Mated 4/5/92 Mated 4/5/92 Mccepted Mccepted Mccepted Mccepted 14 Mated 4/5/92 Mccepted Mccepted Mccepted Mccepted Mccepted 14 Mccepted Mccepted Mccepted Mccepted Mccepted Mccepted 14<	Add luw OTSG level auto start signal.	BA-412024 (180) 500-4248 ECM-180 Test-180	. Englneering	Supp 3 above this item	No inspection required prior to restart
Complete prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASIB Order dated 4/5/82	82-BC Install safety grade 0156 level 40 instrumentation	BA-412012 (RM-13J) SD0-424E ECH-5-216 ECH-266 MIX 127.5.2 TP 250/1.2 TP 250/1.2	Accepted Accepted 1/8/82 Complete Issued	Supp 3 above this item	IR 83-02 IP 250/1 IRE Pending NRR review
	*Complete prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASLB Order dated 4/5/82				
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Intraction Sup 1 above thi: Ita Pending Hist reviewed in the start	Install independent power supplies 180 for condensate storaye tank low-	10 LICENSEE STATUS	NRR STATUS	PEGION I STATUS
Structure Eff find indication Structure Eff support Fit support Eff support Fit support Eff support Fit support Eff support Fit support Eff support Post-accident sampling Eff support Post-accident sampling Eff support Post-accident sampling Eff support Improve post-accident sampling <td></td> <td>160</td> <td>Supp 3 above this item</td> <td>Pending NRR review (see alse v.RDR la-Add'i-</td>		160	Supp 3 above this item	Pending NRR review (see alse v.RDR la-Add'i-
Figure post-accident sampling Figure post-accident sampling Post-accident sampling Improve post-accident sampling - Improve post-accident sampling - restriction per 8-2.1.8.3 (III-24 RCS sampling) - restriction per 8-2.1.8.3 (IIII-24 RCS sampling) - restriction per 8-2.1.8.3 (IIII-24 RCS sampling) - restriction per 8-2.1.8.3 (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	EFW flow indication 2) Add two conic flow devices on each	•	•	Inspection per II.B
Post-accident sampling Inspection per 8-2.1.8.2 Improve post-accident sampling	EFW supply line re: NUREG 0752			
 Improve post-accident sampling	Post-accident sampling			
 (III-24A RCS Sampling) (III-24B Con. Sampling) (III-24B Con. Sampling) (III-24B Con. Sampling) (IIII-24B Con. Sampling) (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	<pre> Improve post-accident sampling capability of reactor coolant and containment atmosphere system ',</pre>	•	•	Inspection per e-c.i.o.a Verify Short lerm if ton Term is not done
(LH-24B Con. Sampling) <u>Radiation monitor range</u> (Long term modifications) - Install two safety grade in- containment radiation souttors can are adequately separated - Camplete prior te startup following Cycle 6 refuelling per staff 2/1/82 License condition and ASLB Order dated 4/5/82	(LII-24A RCS Samp1ing)			•
Radiation monitor range (Long term modifications) Install two safety grade in- containment radiation monitors that are adequately separated *Complete prior te startup following Cycle 6 refuelling per staff 2/1/82 Itense condition and ASLB Order dated 4/5/82	(LM-24B Cont. Sampling)			
 Install two safety grade in- containment radiation monitors that are adequately separated Complete prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASIB Order dated 4/5/82 	Radiation monitor range (Long term modifications)			
•Complete prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASLB Order dated 4/5/82	Install two safety grade in- containment radiation monitors inat are adequately separated	:		Inspection per 8-2.1.8.h
	*Complete prior to startup following Cycle 6 refueling per staff 2/1/82 license condition and ASLB Order dated 4/5/82	• • •		

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APPENDIX LONG TERM ITEMS

THI-I RESTART CONVESSION ORDER

I. NUREG OG THI-I RI ORDER ITEN	680 ESTART EVALUATION REPORT ITEM DESCRIPTION	•	LICENSEE ID NUMBERS/ DUCUMENTATION	LICENSEE STATUS	NRR STATUS	Revision 6 February 8, 1983 REGION 1 STATUS
	(Long term modifications) (continued)				
	Install high-range gas effluent monitors (see PID of 12/14/81 No. 11.L \$ 874-375) (Cert. Item)*	•	-	*-		Inspection per ORUR 8-2.1.8.b
	Install expanded range radio- iodine/particulate sampling system (see PID of 12/14/81 No. 11.L 1 882-882) (Cert. 12em)*		-	-		Inspection per . ORDR 8-2.1.8.6
•	(Short term modification included in final long term monitors per above)					
LT-3 2.1.9 (TAF 1.C.1)	Transient and accident analysis		•			
	A. Inadequate core cooling	•				No Inspection for restar
81-33 03	Licensee action reviewed by HRR. Additional ICC procedures forthcoming (by first refueling after 1/1/82 per TAP I.C.1) (SCHED. TBD - SECY 82-384)	•••	Affected Procedures Ltr 5211-82-134 8/9/82 Cycle 6 3ef.	Working SECY 82-384 ist Ref. Aft. RST.	NRC LIR 10/20/82 (IAP Certifies Reasonably Progress per PID of 12/14/81)	NO INSPECTION IN TESTON
	*Per Staff Enf. Plan dated 2/1/82 and ASLB Order dated 4/15/82	d .	:			

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1. NUREG 06 THIJ-I RE ORDER ITEN	BO START EVALUATION REPORT ITEM DESCRIPTION	THI-1 R (RESTA LICENSEE ID NUMBERS/ DOCUMENTATION	APPENDIX LONG TERM ITEMS ESTART CONMISSION ORDER RT/POST RESTART ITEMS) LICENSEE STATUS	NRR STATUS	Page A9 of 13 Revision 6 February 8, 1983 REGION 1 STATUS
Additional 1	 B. Transient and accidents (long <u>term item)</u> Licensee action reviewed by NRR. Anticipated Transients Operator Guidelines (ATOG) procedures forthcoming (by first refueling after 1/1/82 per <u>TAP 1.C.1</u>) re: See above tems (HOT ORDER ITEMS - PER NUREG O 	Affected Procedure Ltr 5211-82-13 8/9/82 Cycle 6 Ref.	Worktng	Same as above Review ATOG Results	No inspection for restart
Add'1 1tem #1 (TAP TI.F.1(82-8C 01,04 47	Containment pressure 4]) Install containment pressure indicator	BA-412013 (LM-26A) SDD-664A ECM-S-240 ECM-293 ECM-S-212 HTX 184.5.1 TP 250/1, 3	SECY 82-384 COMMIT 3/31/82 Accepted 11/15/82 Accepted Accepted 11/15/82 EST 12/82	Evaluate HUREG 0737 Post Implementation Review	Pending LIC compl. and NRR review (Limited Review for Restart IR 83-02 TP 250/1 & 2 TRF

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Page Al0 of 13	REGION I SIATUS	Pending NRR Review [Limited Review for Restart] IR 33-02 TP 250/L & 2 TPF	Review in conjunction with LM-8C IR 83-02 TP 250/1.1 & 2 1NE TEST REVIEW CONDIFIE	Pending LIE Compl./ IIRR Review (Limited Review for Restart)
	NRR STATUS	Evaluate - NUREG 0737 - Post Implementation Review		Evaluate - Post NUREG 0737 - Post Implementation Review
APPENDIX NG TEAM ITEMS ART CONNISSION POOER POST RESTART ITEMS)	LICENSEE STATUS	SECY 82-384 COMULT 3/31/82 Accepted 10/22/82 Accepted 10/22/82 Accepted 10/22/82 Complete	Complete Accepted 5/6/82 Complete	E81 1/83
IMI-I RESI	LICENSEE 10 NUMBERS/ DOCUMENTATION	BA-412047 (LM-BC) (LM-BC) 500-556B 500-556B ECH-5-133 ECH-5-200 ECH-186 HIX 197.5.2 TP 250/1	TP 250/2 TP-TRD (LN-8A) ECM-5-020 TP-250/1.1.2	BA-412013 (LH-268) 500-6628 DRF-2879 ct a1 MIX 168.5.3 HIX 168.5.3 FP 250/1.2 FP 250/3.1.4.1
	URUER INI-I RESTANT EVALUATION REPURT URUER ITEN DESCRIPTION	Add'l Item 12 Containment water level [IAF II.F.1(5) 82-BC Install wide-range water level 01.04 instrument 48 (by 1/1/82 per IAP II.F.1(5)). Install narrow-range water [cvel instrument 69 ?/1/82 per IAP II.F.1(5))	(LM-BA is control grade monitor installed) Add'l	Item #3 Containment nydrogen [I.k. II. F. 1(6)] 82-BC Install hydrogen indicator 01.04 (by 1/1/82 per TAP II. F. 1(6)) 49

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		LO	ING TERM TIEMS		
		THI-1 REST (RESTART/	POST RESTART ITEMS)		Page All of 13
I. NUREG 0680 THI-1 RESTART	EVALUATION REPORT	LICENSEE ID			February 8, 1983
ORDER I ILLIN	ITEN DESCRIPTION	NUMBERS/ DOCUMENTATION	LICENSEE STATUS	NRR STATUS	REGION 1 STATUS
Add'] 1tcm #4 RCS ve (TAP 11.8.1) 82-8C Ir 01.04 pr 50 (t	enting astall vents at top of ressurizer by 7/1/82 per TAP II.8.1)*	BA-412021 (LH-21A) SDD-222A ECH-S-191/Etc. ECH-S-217 ECH-292 MTX 195.5.3 TP 250/1 TP 250/2 TP 250/3.1 TP 250/4.1 TP 250/5 TP 675/1	Accepted 10/22/02 Accepted 10/22/82 Accepted 10/22/82 Complete Complete Complete Complete Complete Issued-HFT	Evaluate - NUREG 0737 Preimplementation Review of Use (installation authorized)	IR 82-06, para 7.c.(3): TP 675/1 technica adequacy iR 82-19 Procedures for Use IR 82-26 TEST REVIEW FALLP TP 675/1 (NFT) Pending MRk Review - LMTD REVIEW
- (nstall vents at top of hot legs by 7/1/82 per TAP 11.8.1)*	-8A-412023 (1M-218) SDD-22A ECM-TBD ECM-TBD	LTR 5211-82-180 8/23/82 Prov. Add. Info	Evaluate Add. Info - NUREG 0737 Preimplementation Review of Use (Installation authorized)	Pending NRR Review
i i	nstall vents at top of reactor essel head by 7/1/82 per TAP II.B.1)*	BA-412021 (LH-21B) SDB-222A ECM-TRD Test-TBD	LTR 5211-82-180 8/23/82 Prov. Add. Info	Evaluate Add. Info - NUREG 0737 Preimplementation Review of Use (Installation authorized)	Pending NRR Review

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APPENDIX

*Schedule extended by Rule (45 FR 58484) (10 CFR 50.44) (SECY 82-384 CONNIT. 1st Ref. Aft. RST)

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. MAREG OG THI-1 RE	BO START EVALUATION REPORT	TMI-1 RE (RESTAN	LONG YERM ITEMS ESTART CONVISSION ORDER AT/POST RESTART ITEMS)		Page A12 of 13 Revision 6 February 8, 1983
<u>11 M</u>	ITEH DESCRIPTION Install reactor building electrical penetration for RCS venting mods (by 7/1/82 per TAP II.B.?)*	DOCUMENTATION . BA-412011 . (LH-21B) . SDD-222A ECH-TBD . Test-TBD	LTR 5211-82-180 8/23/82 Prov. Add. Info	Evaluate Add. Info - NUREG 0737 Preimplementation Review of Use (Installation authorized)	Pending NRR Review
liscellaneou	<u>s</u> .				
tem 1	Conduit supports				
82-8C 51	Install seismic supports for conduit (related to various modifications required for restart)	BA-412010 (NM-48) ECM-S-143 ECM-S-144 ECM-S-158 ECM-S-161 ECM-S-251 ECM-S-259	Supports other ECM's NA NA Accepted Accepted Accepted Accepted	NA	Near Restart based on Completed Hods Review
	*Schedule extended by Rule (45 FR 58484) (10 CFR 50.44) (SECY 82-384 CONMIT. Ist Ref. Aft. RST)				

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ADDENDLY

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Matrix In the Information Matrix In Interfact Matrix Interfact Matrix Interfac	INNEG THI-1	NESIART EVALUATION REPORT				Revision 6 February 8, 1913	
1.4 Expersy Prepriction (pr. Just Jobs 5 Supplement 1) (1.1. Lengency commutations - Install control row energency - Instrol row energency	ILH .	ITEN DESCRIPTION	LICERISEE 10 NUMBERS/ DOCUMENTATION	LICSHSEE STATUS	NRR STATUS	REGION I STATUS	
(Per Julific - 014 £ Supplement 1) [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2016] [1.f. Excrement 2017] [1.f. Excrement 2017] [1.f. Excrement 2016] [1.f. Excrement 2017] [1.f. 2012] [1.f. Excrement 2016] [1.f. Excrement 2017] [1.f. 2012] [1.f. Excrement 2016] [1.f. 2012] [1.f. 2012] [1.f. 2012]	1-1	Emergency Prepareciness		•			
I.f. Leargency communication - Install control room encrymery M-13065 Complete - 1 10.02.10 Complete - 1 10.02.10 - Install control room encrymery M-13065 Complete - 1 10.02.10 Complete - 1 10.02.10 - Risblace M-13065 Complete - 1 10.02.10 Complete - 1 10.02.10 - Risblace M-13065 Complete - 1 0.0.1205 Complete - 1 10.02.11 - Risblace M-13065 Complete - 1 0.0.1205 Complete - 1 10.0015 - Risblace M-13065 Complete - 1 0.0.1208 Complete - 1 10.0015 - Construct energency factoring M-13065 Complete - 1 10.02.11 10.02.11 - Construct energency factoring M-13065 Complete - 1 10.02.11 10.02.11 - Construct energency factoring M-13065 Complete - 1 10.02.11 10.02.11 - Construct energency factoring M-13004 M-1306 Complete - 1 10.02.11 - Construct energency factoring M-13004 M-1306 <td< td=""><td></td><td>{Per JIUREG-0746 & Supplement 1)</td><td></td><td></td><td></td><td></td><td></td></td<>		{Per JIUREG-0746 & Supplement 1)					
 Install cantrol room encryency (M-1006) (M-1		11.F. Emergency communications					
82-15. - Connect emergency tetcplone 0.4-1206 0.92-15. xx cqu/peent to vitil poeer supply 50-25. Accepted 4/12/82 0.182-15. 11.4 Emergency factilities and 0.12-5.27 Accepted 4/12/82 0.182-15. 11.4 Emergency factilities and 0.12-5.27 Accepted 4/12/82 0.182-15. 11.4 Emergency factilities and 0.182-15. Complete 0.182-15. 0.5 Complete Complete 0.182-15. 0.182-15. 0.10 See D745, sup 1, 11.1) 0.1006155 0. 0.011624 0.182-15. 0.5 C		Install control roor emergency telephone (Not Line)	BA-412086 (NI-47) 500-180 ECK-5-136 NIX 214.5.2 TP 250/2	Accepted 5/26/82 Complete	Complete - NUREG 0746	IR 82-10: Ibid Review IR 82-26 TEST REVIEC COMPLETE	
11.H. faergency facilities and cylineert 03-0C	82-15 XX	Connect emergency telephone equipment to vital power supply	BA-412086 (F1-18) 500-735 ECN-237 MIX 274.5.3 TP 250/2	Accepted 4/12/82 Complete	Complete - NUREG 0746	IN 82-15: Mud Review 01 82-15-01: Source of VILal Power for ENS Est. 2/83 01 82-15-02: CLOSED 01 82-15-03: Fire Barriev notification form/PSI PSI IR 82-26 TEST REVIEW ADDRESS 01s	
03-06 Construct emergency facilities 84-432014 05 as per HUS(EG-0696 Sol-180 Sol-180 Burlen 112/82 Suppl 1 12/82 Burlen 110, 12/82 Burlen 110, 12/82 Burlen 1 12/82 Burlen 110, 12, 100 For 111, 11, 12, 12, 12, 12, 12, 12, 12, 12		11.H Energency facilities and cquipment (Also see 0746, Supp 1, 11.H)					
re: IAP 111.A.1.2 and IAP 111.A.2.2 (PH-50 7) • Engineering (SCHED. 100 per SECY 02-111) • ECH-100 • • • • • • • • • • • • • • • • • •	03-0C	Construct emergency facilities : as per HUSREG-0696 Near site EOF/Env. Con. Center Upgrade	84-432014 500-180 (PN-8C 7) ECN-180 10-180	Engineering	NUREG 0737 Supp1 1 12/82	TBD (Not Required for Restart)	
		re: TAP 111.A.1.2 and TAP 111.A.2 (SCHED. TBD per SECY 02-111)	2 (PH-SD 7) -	Engineering			4
		analog praticulty and additional property of the state					

TMI-1 - NUREG-0737

REVIEW STATUS

The staff has "eviewed the status of TMI-1 with respect to NUREG-0737. Specifically, the concern is whether or not an SER has been issued to the licensee, thus closing out a specific NUREG-0737 item, or whether the item is still under staff review.

The review status of TMI-1 with respect to NUREG-0737 was determined from several sources of information. NUREG-0680 and its Supplements 1, 2 and 3 contain evaluations of the licensee's compliance with the short and long term items of Section II of the NRC Order dated August 9, 1979. These documents are dated June 1980, November 1980, March 1981 and April 1981. Another source of information is an April 22, 1981 letter from James Cutchin, Counsil for NRC Staff, to Ivan Smith, Chairman of the Atomic Safety and Licensing Board. This letter contails Safety Evaluation Reports for items in NUREG-0694 and Enclosure 1 to NUREG-0737 outside of the content of the Commission's Orders of August 9, 1979 and March 6, 1980 required by restart. Another source of information was the correspondence from the staff to Metropolitan Edison Co. in the time period from October, 1980 to present. Other sources of information included discussions with lead project managers of various NUREG-0737 items, and the author's knowledge of the review status of NUREG-0737.

Enclosures 1 and 2 summarize the staff's efforts. Enclosure 1 identifies those NUREG-0737 items for which there is no closeout SER (open items). Enclosure 2 provides a short discussion of all applicable NUREG-0737 items. The discussion includes a brief paragraph of the requirement and a statement concerning the current review status.

In summary, there are 21 open items for TMI-1. Five of these items have been subsumed in Supplement 1 to NUREG-0737. Of the remaining sixteen, the staff and licensee are extremely close to resolving six (II.E.1.1, II.E.1.2, II.F.1.3, II.K.2.17, III.A.2.1, III.D.3.4). Resolution of II.K.3.1, II.K.3.2, II.K.3.30 and II.K.3.31 are contingent on staff efforts, and II.B.1, II.B.3, II.F.1.4 II.F.1.5, II.F.1.6 and II.F.2 are under staff review.

In conclusion we feel that the licensee for TMI-1 has responded to MUREG-0737 above average with respect to other licensees.

ENCLOSURE 1

NUREG-0737 ITEMS FOR WHICH THERE

IS NOT A CLOSEOUT SER FOR TMI-1

Title

Status

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I.C.1 - Short Term Accident and Procedures Review

I.D.1 - Control Room Design Review

I.D.2 - Plant Safety Parameter Display Console

I'.B.1 - Reactor Coolant System Vents

II.B.3 - Post-accident Sampling

II.E.1.1 - Auxiliary Feedwater
System Evaluation

II.E.1.2 - Auxiliary Feedwater
System Initiation and Flow

II.F.1.3 - Containment Hi-Range
Monitor

All licensees are to respond to Supplement 1 of NUREG-0737. Under staff review.

All licensees are to respond to Supplement 1 of NUREG-0737. Under Staff Review.

All licensees are to respond to Supplement 1 of NUREG-0737. Under staff review.

All licensees are to comply with 10 CFR 50.44. Under staff review. SER expected in June 1983.

Licensee is in compliance with the short term part of this item. Long term part under staff review.

Supplement 3 to NUREG-0680 provides documentation to consider this issue resolved except for one item which is being addressed n a forthcoming license condition. This item needs an SER.

Supplement 3 to NUREG-0680 contains information which closes out all parts of this item but one. That part will be contained as a license condition. This item needs an SER.

Supplement 3 to NUREG-0680 contains information which closes out all parts of the item with one exception. This item needs a follow-up SER.

Title

II.F.1.4 - Containment Pressure
Monitor

II.F.1.5 - Containment Water Level
Monitor

II.F.1.6 - Containment Hydrogen Monitor

II.F.2 - Inadequate Core Cooling

II.K.2.17 - Voiding in the Reactor Coolant System

II.K.3.1 - Auto PORV Isolation

II.K.3.2 - Report on PORV Failures

II.K.3.30 - Small Break LOCA Methods

!I.K.3.31 - Small Break LOCA Plant Unique Analysis

III.A.1.2 - Upgrade Emergency
Support Facilities

III.A.2.1 - Upgrade Emergency Plans

III.A.2.2 - Meteorological Data

III.D.3.4 - Control Room Habitability

Status

Supplement 3 to NUREG-0680 concludes that the licensee has made reasonable progress on this item. Under staff review.

Same status as II.F.1.4.

Same status as II.F.1.4

An Order issued on December 10, 1982 requires installation which conforms to Item II.F.2 of NUREG-0737. Under staff review.

Generic SERs were sent to all B&W licensees, except TMI-1, which closes out this item. TMI-1 should be sent an SER as well.

The review of this item is conditional upon the review of item II.K.3.2. Under staff review.

Under staff review. All licensees have been sent requests for additional information.

The licensee is participating with the B&W Owners Group for this item. Under staff review.

This item is not required until one year after staff approval of the generic model, II.K.3.30. Under staff review.

All licensees are to respond to Supplement 1 of NUREG-0737. Under staff review.

Under staff review. SER expected in June 1983.

All licensees are to respond to Supplement 1 of NUREG-0737. Under staff review.

Under staff review. SER expected in June 1983.

ENCLOSURE 2

1. Item I.A.1.1 SHIFT TECHNICAL ADVISOR

The licensee shall provide an on-shift technical advisor to the shift supervisor. The shift technical advisor (STA) may serve more than one unit at a multiunit site if qualified to perform the advisor function for the various units.

The STA shall have a bachelor's degree or equivalent in a scientific or engineering discipline and have received specific training in the response and anlysis of the plant for transients and accidents. The STA shall also receive training in plant design and layout, including the capabilities of instrumentation and controls in the control room. The licensee shall assign normal duties to the STAs that pertain to the engineering aspects of assuring safe operations of the plant, including the review and evaluation of operating experience.

The implementation of this item was to be completed in three parts:

- (1) Training to be completed by 1/1/81
- (2) Description of training program provided to the staff
- (3) Description of the long-term STA program

Items (1) and (2) were reviewed and found acceptable in NUREG-0680. This NUREG also addressed the long term program presented in the licensee's letter dated March 19, 1981. The staff concluded that the licensee was in compliance with all aspects of this item.

2. Item I.A.1.2 SHIFT SUPERVISOR RESPONSIBILITIES

In NUREG-7580 Supplement 1, the staff found that the licensee has reviewed the administrative duties of the Shift Supervisor to assure that they to not detract from his primary responsibilities of command and control. Documentation can be found in the licensee's restart report 5.2.6.

3. Item I.A.1.3 SHIFT MANNING

This position defines shift manning requirements for normal operation. The letter of July 31, 1980, from D. G. Eisenhut to all power reactor licensees and applicants for a license sets forth the interim criteria for shift staffing (to be effective pending general criteria that will be the subject of future rulemaking). Overtime restrictions were also included in the July 31, 1980, letter. The implementation of this item has been conducted in two parts:

- (1) Overtime administrative procedures
- (2) Shift manning

NUREG-0680 Supplement 1, contains licensee committments found acceptable by the staff. The licensee stated their intention to conform to the staff's interim position dated July 31, 1980. The licensee's committment is contained in their letter dated October 20, 1980.

In addition the staff reviewed the licensee's submittal dated December 18, 1981, and in the evaluation, dated February 5, 1932 the staff concluded that the licensee's plans for shift staffing at fart were acceptable.

4. Item I.A.2.1 IMMEDIATE UPGRADING OF REACTOR OPERATOR SENIOR REACTOR OPERATOR TRAINING AND QUALIFICATIONS

Effective December 1, 1980, an applicant for a senior reactor operator (SRO) license will be required to have been a licensed operator for 1 year.

The implementation of this item was carried out by ensuring that:

- (1) SRO has proper experience.
- (2) SROs be ROs for One year
- (3) Three months training on shift
- (4) Modify training
- (5) Certification of facility training programs

The licensee provided in their letter dated September 8, 1980, information which the staff reviewed and concluded in NUREG-0680 Supplement 1 to be acceptable for this item.

5. Item I.A.2.3 ADMINISTRATION OF TRAINING PROGRAMS

Pending accreditation of training institutions, licensees and applicants for operating licenses will assure that training center and facility instructors who teach systems, integrated responses, transient, and simulator courses demonstrate senior reactor operator (SRO) qualifications and be enrolled in appropriate requalification programs.

The licensee provided in their letter dated September 8, 1980, information which the staff reviewed and concluded in NUREG-0680 Supplement 1 to be acceptable for this item.

Simulator examinations will be included as part of the licensing examination. The implementation of this item entailed three parts:

(1) Increase the scope of the licensing examination

(2) Increase the passing grade on the RO and SRO examination

(3) Conduct simulator examinations

6.

SIMULATOR EXAMS

The licensee in letters dated June 30, 1980, and October 3, 1980, address the requirements listed above. The results of the staff's review are contained in NUREG-0680 Supplement 1. The staff concluded that the licensee is in conformance with this item.

7. Item I.B.1.2 INDEPENDENT SAFETY ENGINEERING GROUP

Each applicant for an operating license shall establish an onsite independent safety engineering group (ISEG) to perform independent reviews of plant operations.

The principal function of the ISEG is to examine plant operating haracteristics, NRC issuances, Licensing Information Service advisories, a J other appropriate sources of plant design and operating experience information that may indicate areas for improving plant safety. The ISEG is to perform independent review and audits of plant activities. Where useful improvements can be achieved, it is expected that this group will develop and present detailed recommendations to corporate management for such things as revised procedures or equipment modifications.

Another function of the ISEG is to maintain surveillance of plant operations and maintenance activities to provide independent verification that these activities are performed correctly and that human errors are reduced as far as practicable. ISEG will then be in a position to advise utility management on the overall quality and safety of operations. ISEG need not perform detailed audits of plant operations and shall not be responsible for sign-off functions such that it becomes involved in the operating organization.

This item was to be implemented by OL applicants solely. However, along with Zion and Indian Point, Till-1 was required to meet this requirement. To do so, an Independent Onsite Safety Review Group (IOSRG) was formed. The licensee's IOSRG was reviewed against the draft guidelines contained in NUREG-0731.

The staff concluded in NUREG 0680 Supplement 1 that the licenses is in conformance with the draft guidelines.

8. Item I.C.1 GUIDANCE FOR THE EVALUTION AND DEVELOPMENT OF PROCEDURES FOR TRANSIENTS AND ACCIDENTS

In letters of September 13 and 27, October 10 and 30, and November 9, 1979, the Office of Nuclear Reactor Regulation required licensees of operating plants, applicants for operating licenses and licensees of plants under contruction to perform analyses of transients and accidents, prepare emergency procedure guidelines, upgrade emergency procedures, including procedures for operating with natural circulation conditions, and to conduct operator retraining (see also item I.A.2.1). Emergency procedures are required to be consistent with the actions necessary to cope with the transients and accidents analyzed. Analyses of transients and accidents were to be completed in early 1980 and implementation of procedures and retraining were to be completed 3 months after emergency procedure guidelines were established; however, some difficulty in completing these requirements has been experienced. Clarification of the scope of task and appropriate schedule revisions are being developed. In the course of review of these matters on Batcock and Wilcox (B&W)-designed plants, the staff will follow up on the Bulletin and Orders matters relating to analysis methods and results, as listed in NUREG-0660, Appendix C (see Table C.1, items 3, 4, 16, 18, 24, 25, 26, 27; Table C.2, items 4, 12, 17, 18, 19, 20; and Table C.3, items 6, 35, 37, 38, 39, 41, 47, 55, 57).

The implementation of this item was to be completed in 5 parts:

- Evaluation of a small break loss of coolant accident (SBLOCA)
- (2) Inadequate core cooling

2

- (a) Reanalyze and propose guidelines
- (b) Revise procedures
- (3) Transients and accidents
 - (a) Reanalyze and propose guidelines
 - (b) Revise procedures

This item was subsumed into Supplement 1 of NUREG-0737 and the schedule for completion is being negotiated with the Project Manager. The licensee has provided submittals for:

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- (1) SBLOCA license submittal-restart report 3.1, 10.4
- (2) Inadequate Core Cooling letter June 30, 1980
- (3) Transients and Accidents letter January 30, 1981

The staff in an evaluation concludes that the licensee is making satisfactory progress to date.

9. Item I.C.2 SHIFT AND RELIEF TURNOVER PROCEDURES

Plant procedures shall be established to require signed checklists and logs to assure that the operating staff possess adequate knowledge of critical plant parameter status, system status, availability and alignment. The licensee has revised his procedures to provide for the described activities. Details of the evaluation and the staff's conclusion that the procedures are acceptable are found in NUREG-0680, Supplement 1.

10. Item I.C.3 SHIFT SUPERVISOR RESPONSIBILITY

A corporate directive was issued to clearly establish and emphasize the command duties and primary management responsibilities of the Shift Supervisor. Plant procedures were revised to clearly define duties, responsibilites, and authority of the shift supervisor and the control room operators.

The staff concluded in NUREG-0680, Supplement 1 that the licensee, in issuing such a directive and revising Administrative Procedures AP-1009 to establish the line of command during normal and off-normal conditions, has demonstrated conformance. This is documented in the licensee's restart report 5.2.6, Supplement 1.

11. Item I.C.4 CONTROL-ROOM ACCESS

Procedures shall be established to limit a cess to the control room to certain individuals, and to define a clear line of authority, responsibility, and succession in the control room.

The staff concluded in NUREG-0630, Supplement 1 that the licensee has revised his administrative procedures to meet this objective. Details of this item are found in the licensee's restart report 4.0, 10.3.3, and 10.3.4.

12. Item I.C.5 PROCEDURES FOR FEEDBACK OF OPERATING EXPERIENCE TO PLANT STAFF

In accordance with Task Action Plan I.C.5, Procedures for Feedback of Operating Experience to Plant Staff (NUREG-0660), each applicant for an operating license shall prepare procedures to assure that operating information pertinent to plant safety originating both within and cutside the utility organization is continually supplied to operators and other personnel and is incorporated into training and retraining programs. These procedures shall:

- Clearly identify organizational responsibilities for review of operating experience, the feedback of pertinent information to operators and other personnel, and the incorporation of such information into training and retraining programs;
- (2) Identify the administrative and technical review steps necessary in translating recommendations by the operating experience assessment group into plant actions (e.g., changes to procedures; operating orders);
- (3) Identify the recipients of various categories of information from operating experience (i.e., supervisory personnel, shift technical advisors, operators, maintenance personnel, health physics technicians) or otherwise provide means through which such information can be readily related to the job functions of the recipients;
- (4) Provide means to assure that affected personnel become aware of and understand information of sufficient importance that should not wait for emphasis through routine training and retraining programs;
- (5) Assure that plant personnel do not routinely receive extraneous and unimportant information on operating experience in such volume that it would obscure priority information or otherwise detract from overall job performance and proficiency;
- (6) Provide suitable checks to assure that conflicting or contradictory information is not conveyed to operators and other personnel until resolution is reached; and,
- (7) Provide periodic internal audit to assure that the feedback program functions effectively at all levels.

The licensee's program was reviewed and the staff concluded in NUREG-0680 Supplement 2 that it was acceptable. This was presented to the staff in the licensee's letter of October 20, 1980.

13. Item I.C.6 GUIDANCE ON PROCEDURES FOR VERIFYING CORRECT PERFORMANCE OF OPERATING ACTIVITIES

It is required (from NUREG-0660) that licensee's procedures be reviewed and revised, as necessary, to assure that an effective system of verifying the correct performance of operating activities is provided as a means of reducing human errors and improving the quality of normal operations. This will reduce the frequency of occurrence of situations that could result in or contribute to accidents. Such a verification system may include automatic system status monitoring, human verification of operations and maintenance activities independent of the people performing the activity (see NUREG-0585, Recommendation 5), or both.

Implementation of automatic status monitoring if required will reduce the extent of human verification of operations and maintenance activities but will not eliminate the need for such verification in all instances. The procedures adopted by the licensees may consist of two phases--one before and one after installation of automatic status monitoring equipment, if required, in accordance with item I.D.3.

This item was reviewed by OIE. A SER was not required to be generated. The licensees restart report 3.1 contains additional information.

14. Item I.C.7 NSSS VENDOR REVIEW OF PROCEDURES

This item was identified in NUREG-0660, but was not required for operating reactors, and specific requirements do not appear in NUREG-0737. However, for TMI-1 the staff requires NSSS vendor review of: (1) the special low power test program, (2) the proposed power ascension program after restart, and (3) the emergency procedures.

The staff has reviewed this item in their April 22, 1981 SERs presented before the Board, and concluded that the licensee has committed to the requirements of I.C.7. The licensee's April 14, 1981 submittal contains additional information.

15. Item I.C.8 PILOT MONITORING OF SELECTED EMERGENCY PROCEDURES

Correct emergency procedures, as necessary, based on the NRC audit of selected plant emergency operating procedures (e.g., smallbreak LOCA, loss of feedwater, restart of engineered safety features following a loss of AC power, steam line break, or steam generator tube rupture).

The staff has reviewed this requirement in their April 22, 1981 SERs presented before the Board, and concluded that no further effort is required under this item.

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Item I.D.1 CONTROL-ROOM DESIGN REVIEWS

In accorance with Task Action Plan I.D.1, Control Room Design Reviews (NUREG-0660), all licensees and applicants for operating licenses will be required to conduct a detailed control-room design review to identify and correct design deficiencies. This detailed control-room design review is expected to take about a year. Therefore, the Office of Nuclear Reactor Regulation (NRR) requires that those applicants for operating licenses who are unable to complete this review prior to issuance of a license make preliminary assessments of their control rooms to identify significant human factors and instrumentation problems and establish a schedule approved by NRC for correcting deficiencies. These applicants will be required to complete the more detailed control room review on the same schedule as licensees with operating plants.

This item was subsumed into Supplement 1 of NUREG-0737 and the schedule for completion is being negotiated with the Project Manager. Previously the staff issued on April 17, 1982, Supplement 1 to NUPEG-0752 which updates the original Control Room Design Review report. The report concludes that with the corrections required prior to restart, the potential for operator error lending to serious consequences as a result of human factors considerations in the control room is sufficiently low to permit restart and full power operation. The licensee submittals on this subject are dated July 14, 1980, and November 7, 1980.

17. Item I.D.2 PLANT SAFETY PARAMETER DISPLAY CONSOLE

In accordance with Task Action Plan I.D.2, Plant Safety Parameter Display Console (NUREG-0660), each applicant and licensee shall install a safety parameter display system (SPDS) that will display to operating personnel a minimum set of parameters which define the safety status of the plant. This can be attained through continuous indication of direct and derived variables as necessary to assess plant safety status.

This item is to be implemented in two parts:

- (1) Provide a description of the system
- (2) Install the system

This item was subsumed into Supplement 1 of NUREG-0737 and the schedule for completion is being negetiated with the Project Manager.

18. Item I.G.1 LOW POWER TEST PROGRAM

By letter dated January 28, 1981, ONRR requested that Metropolitan Edison Co. propose a special low power test program similar to those performed by near term operating license applicants in response to NRC Task Action Plan Item I.G.1. This test provides additional operator training when operating the plant in a natural circulation cooling mode, provides verification of natural circulation characteristics and validates the operating procedures for natural circulation conditions.

By letter dated December 21, 1982, from Mr. John Stolz to Mr. Henry Hukill NRR informed the licensee that the proposed low power test program was acceptable. The staff concluded that the planned low power test program will meet the objectives of Item I.G.1 and will provide significant additional operator training, will verify natural circulation characteristics and will validate operating procedures.

19. Item II.B.1 REACTOR COOLANT SYSTEM VENTS

Each applicant and licensee shall install reactor coolant system (RCS) and reactor vessel head high point vents remotely operated from the control room. Although the purpose of the system is to vent noncondensible gases from the RCS which may inhibit core cooling during natural circulation, the vents must not lead to an unacceptable increase in the probability of a loss-of-coolant accident (LOCA) or a challenge to containment integrity. Since these vents form a part of the reactor coolant pressure boundary, the design of the vents shall conform to the requirements of Appendix A to 10 CFR Part 50, "General Design Criteria." The vent system shall be designed with sufficient redundancy that assures a low probability of inadvertent or irreversible actuation.

Each licensee shall provide the following information concerning the design and operation of the high point vent system:

- Submit a description of the design, location, size, and power supply for the vent system along with results of analyses for loss-of-coolant accidents initiated by a break in the vent pipe. The results of the analyses should demonstrate compliance with the acceptance criteria of 10 CFR 50.46.
- (2) Submit procedures and supporting analysis for operator use of the vents that also includes information available to the operator for initiating or terminating vent usage.

This item contains three parts to ensure proper implementation:

- (1) The information requested above in items (1) and (2)
- (2) A discussion of the design
- (3) Supporting information

Prior to the generation of NUREG-0680 the licensee stated their intent to install vents in the RCS and provided a preliminary design. The licensee has installed vents in the pressurizer, and the head and hot leg vents will be installed by the first refueling outage after restart in accordance with 10 CFR 50.44. Therefore, this item is no longer an issue. 20. Item II.B.2 DESIGN REVIEW OF PLANT SHIELDING AND ENVIRONMENTAL QUALIFICATION OF EQUIPMENT FOR SPACES/SYSTEMS WHICH MAY BE USED IN POSTACCIDENT OPERATIONS

With the assumption of a postaccident release of radioactivity equivalent to that described in Regulatory Guides 1.3 and 1.4 (i.e., the equivalent of 50% of the core radioiodine, 100% of the core noble gas inventory, and 1% of the core solids are contained in the primary coolant), each licensee shall perform a radiation and shielding-design review of the spaces around systems that may, as a result of an accident, contain highly radioactive materials. The design review should identify the location of vital areas and equipment, such as the control room, radwaste control stations, emergency power supplies, motor control center, and instrument areas, in which personnel occupancy may be unduly limited or safety equipment may be unduly degraded by the radiation fields during postaccident operations of these systems.

Each licensee shall provide for adequate access to vital areas and protection of safety equipment by design changes, increased permanent or temporary shielding, or postaccident procedural controls. The design review shall determine which types of corrective actions are needed for vital areas throughout the facility.

The implementation of this item entails conformance with three items:

- (1) Design reviews
- (2) Plant modifications
- (3) Equipment Qualification

The licensee will implement this item at the first refueling outage after restart per SECY 82-384A. The staff's SER was issued on March 28, 1983.

21. Item II.B.3 POST ACCIDENT SAMPLING CAPABILITY

A design and operational review of the reactor coolant and containment atmosphere sampling line systems shall be performed to determine the capability of personnel to promptly obtain (less than 1 hour) a sample under accident conditions without incurring a radiation exposure to any individual in excess of 3 and 18-3/4 rem to the whole body or extremities, respectively. Accident conditions should assume a Regulatory Guide 1.3 or 1.4 release of fission products. If the review indicates that personnel could not promptly and safely obtain the samples, additional design features or shielding should be provided to meet the criteria.

1.3

A design and operational review of the radiological spectrum analysis facilities shall be performed to determine the capability to promptly quantify (in less than 2 hours) certain radionuclides that are indicators of the degree or core damage. Such radionuclides are noble gases (which indicate cladding failure), iodines and cesiums (which indicate high fuel temperatures), and nonvolatile isotopes (which indicate fuel melting). The initial reactor coolant spectrum should correspond to a Regulatory Guide 1.3 or 1.4 release. The review should also consider the effects of direct radiation from piping and components in the auxiliary building and possible contaimination and direct radiation from airborne effluents. If the review indicates that the analyses required cannot be performed in a prompt manner with existing equipment, then design modifications or equipment procurement shall be undertaken to meet the criteria.

In addition to the radiological analyses, certain chemical analyses are necessary for monitoring reactor conditions. Procedures shall be provided to perform boron and chloride chemical analyses assuming a highly radioactive initial sample (Regulatory Guide 1.3 or 1.4 source term). Both analyses shall be capable of being completed promptly (i.e., the boron sample analysis within an hour and the chloride sample analysis within a shift).

The implementation of this item was to be completed in two parts:

(1) Provide an interim system

....

(2) Install a permanent postaccident sampling system

The licensee implemented this item on March 31, 1983, per SECY 82-384. The short term program identified in NUREG-0680 Supplement 3 is closed The long term program remains open.

22. Item II.B.4 TRAINING FOR MITIGATING CORE DAMAGE

Licensees are required to develop a training program to teach the use of installed equipment and systems to control or mitigate accidents in which the core is severely damaged. They must then implement the training program.

The staff, in their April 22, 1981, SERs presented before the Board, concluded that the licensee's training program is acceptable. Additional training on instrument response in an accident environment was to be provided after development. This review was based on licensee submittals of October 8, 1980, and January 21, 1981.

23. Item II.D.1 PERFORMANCE TESTING OF BOILING-WATER REACTOR AND PRESSURIZED-WATER REACTOR RELIEF AND SAFETY VALVES (NUREG-0578, SECTION 2.1.2)

Pressurized-water reactor and boiling-water reactor licensees and applicants shall conduct testing to qualify the reactor coolant system relief and safety valves under expected operating conditions for designbasis transients and accidents.

This item was to be implemented in four parts:

- (1) Submit a test program
- (2) Relief valve and safety valve testing
 - (a) Complete testing
 - (b) Generate a plant specific report
- (3) Block valve testing

The licensee is participating in the EPRI program. The staff has concluded in NUREG-0680 that this is acceptable. Reports will be submitted regarding relief valves, safety valves and block valves prior to restart.

24. Item II.D.3 DIRECT INDICATION OF RELIEF-AND SAFETY-VALVE POSITION

Reactor coolant system relief and safety valves shall be provided with a positive indication in the control room derived from a reliable valve-position detection device or a reliable indication of flow in the discharge pipe.

The licensee submitted in an October 2, 1980, letter information which the staff found acceptable and stated in NUREG-0680, Supplement 3.

25. Item II.E.1.1 AUXILIARY FEEDWATER SYSTEM EVALUATION

The Office of Nuclear Reactor Regulation is requiring reevaluation of the auxiliary feedwater (AFW) systems for all PWR operating plant licensees and operating license applicants. This action includes:

: *

- Perform a simplified AFW system reliability analysis that uses event-tree and fault-tree logic techniques to determine the potential for AFW system failure under various loss-of-mainfeedwater-transient conditions. Particular emphasis is given to determining potential failures that could result from human errors, common causes, single-point vulnerabilities, and test and maintenance outages;
- (2) Perform a deterministic review of the AFW system using the acceptance criteria of Standard Review Plan Section 10.4.9 and associated Branch Technical Position ASB 10-1 as principal guidance; and
- (3) Reevaluate the AFW system flowrate design bases and criteria.

The licensee submitted information in their restart report 2.1.1.7. The implementation of long term modifications will be completed by the first refueling following restart (SECY 82-384). Supplement 3 to NUREG-0680 provides documentation to consider this issue resolved except for item 1a - Additional item 7, which is being addressed in a forthcomming license condition.

26. Item II.E.1.2 AUXILIARY FEEDWATER SYSTEM AUTOMATIC INITIATION AND FLOW INDICATION

PART 1: Auxiliary Feedwater System Automatic Initiation

Consistent with satisfying the requirements of General Design Criterion 20 of Appendix A to 10 CFR Part 50 with respect to the timely initiation of the auxiliary feedwater system, the following requirements shall be implemented in the short term:

- (1) The design shall provide for the automatic initiation of the AFWS.
- (2) The automatic initiation signals and circuits shall be designed so that a single failure will not result in the loss of AFKS function.
- (3) Testability of the initiating signals and circuits shall be a feature of the design.
- (4) The initiating signals and circuits shall be powered from the emergency buses.
- (5) Manual capability to initiate the AFWS from the control room shall be retained and shall be implemented so that a single failure in the manual circuits will not result in the loss of system function.

- (6) The ac motor-driven pumps and valves in the AFWS shall be included in the automatic actuation (simultaneous and/or sequential) of the loads onto the emergency buses.
- (7) The automatic initiating signals and circuits shall be designed so that their failure will not result in the loss of manual capability to initiate the AFWS from the control room.

In the long term, the automatic initiation signals and circuits shall be upgraded in accordance with safety-grade requirements.

PART 2: Auxiliary Seedwater System Flowrate Indication

Consistent with satisfying the requirements set forth in General Design Criterion 13 to provide the capability in the control room to ascertain the actual performance of the AFWS when it is called to perform its intended function, the following requirements shall be implemented:

- Safety-grade indication of auxiliary feedwater flow to each steam generator shall be provided in the control room.
- The auxiliary feedwater flow instrument channels shall be powered from the emergency buses consistent with satisfying the emergency power diversity requirements of the auxiliary feedwater system set forth in Auxiliary Systems Branch Technical Position 10-1 of the Standard Review Plan, Section 10.4.9.

The licensee addressed this issue in their restart report 2.1.1.7. The implementation will be completed by the first refueling after restart per SECY 82-384. Supplement 3 to NUREG-0680 contains information which closes all parts of this item but one. That item, identified in Supplement 3 to NUREG-0680 will be incorporated as a license condition.

27. Item II.E.3.1 EMERGENCY POWER SUPPLY FOR PRESSURIZER HEATERS

Consistent with satisfying the requirements of General Design Criteria 10, 14, 15, 17, and 20 of Appendix A to 10 CFR Part 50 for the event of loss of offsite power, the following positions shall be implemented:

(1) The pressurizer heater power supply design shall provide the capability to supply, from either the offsite power source or the emergency power source (when offsite power is not available), a predetermined number of pressurizer heaters and associated controls necessary to establish and maintain natural circulation at hot standby conditions. The required heaters and their controls shall be connected to the emergency buses in a manner that will provide redundant power supply capability.

- (2) Procedures and training shall be establised to make the operator aware of when and how the required pressurezer heaters shall be connected to the emergency buses. If required, the procedures shall identify under what conditions selected emergency loads can be shed from the emergency power source to provide sufficient capacity for the connection of the pressurizer heaters.
- (3) The time required to accomplish the connection of the preselected pressurizer heater to the emergency buses shall be consistent with the timely initiation and maintenance of natural circulation conditions.
- (4) Pressurizer heater motive and control power interfaces with the emergency buses shall be accomplished through devices that have been qualified in accordance with safety-grade requirements.

The licensee in their restart report 2.1.1.3 and 1.1.2.3 address this item. The staff determined in NUREG-0680 that, subject to satisfactory completion of a demonstration that the transfer can be accomplished within a 2 hour period, this item will be closed.

28. II.E.4.1 DEDICATED HYDROGEN PENETRATIONS

Plants using external recombiners or purge systems for postaccident combustible gas control of the containment atmosphere should provide containment penetration systems for external recombiner or purge systems that are dedicated to that service only, that meet the redundancy and single-failure requirements of General Design Criteria 54 and 56 of Appendix A to 10 CFR 50, and that are sized to satisfy the flow requirements of the recombiner or purge system.

The procedures for the use of combustible gas control system following an accident that results in a degraded core and release of radioactivity to the containment must be reviewed and revised, if necessary.

The implementation of this item was to be compleced in two parts, design and installation. The staff in Supplement 3 to NUREG 0680 has found the licensee's submittal, restart report 2.1.1.4 and 1.1.2.4 to be adequate.

29. Item II.E.4.2 CONTAINMENT ISULATION DEPENDABILITY

 Containment isolation system designs shall comply with the recommendations of Standard Review Plan Section 6.2.4 (i.e., that there be diversity in the parameters sensed for the initiation of containment isolation).

- (2) All plant personnel shall give careful consideration to the definition of essential and nonessential systems, identify each system determined to be essential, identify each system determined to be nonessential, describe the basis for selection of each essential system, modify their containment isolation designs accordingly, and report the results of the reevaluation to the NRC.
- (3) All nonessential system shall be automatically isolated by the containment isolation signal.
- (4) The design of control systems for automatic containment isolation valves shall be such that resetting the isolation signal will not result in the automatic reopening of containment isolation valves. Reopening of containment isolation valves shall require deliberate operator action.
- (5) The containment setpoint pressure that initiates containment isolation for nonessential penetrations must be reduced to the minimum compatible with normal operating conditions.
- (6) Containment purge valves that do not satisfy the operability criteria set forth in Branch Technical Position CSB 6-4 or the Staff Interim Position of October 23, 1979, must be sealed closed as defined in SRP 6.2.4, item II.3.f during operational conditions 1, 2, 3, and 4. Furthermore, these valves must be verified to be closed at least every 31 days.
- (7) Contairment purge and vent isolation valves must close on a high radiation signal.

The staff has reviewed all parts of this item and concluded in their April 22, 1981, SERs presented before the Board, and NUREG-0680 that the licensee has met this requirement.

30. Item II.F.1 ADDITIONAL ACCIDENT-MONITORING INSTRUMENTATION

Item II.F.1 of NUREG-0660 contains the following subparts:

- (1) Noble gas effluent radiological monitor;
- (2) Provisions for continuous sampling of plant effluents for postaccident releases of radioactive iodines and particulates and onsite laboratory capability (this requirements was inadvertently omitted from NUREG-0660: see Attachment 2 that follows, for position);
- Containment high-range radiation monitor;

(4) Containment pressure monitor;

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- (5) Containment water level monitor; and
- (5) Containment hydrogen concentration monitor.

NUREG-0578 provided the basic requirements associated with items (1) through (3) above. Letters issued to all operating nuclear power plants dated September 13, 1979, and October 30, 1979, provided clarification of staff requirements associated with items (1) through (6) above. Attachments 1 through 6 present the NRC position on these matters.

It is important that the displays and controls added to the control room as a result of this requirement not increase the potential for operator error. A human-factor analysis should be performed taking into consideration:

- (a) the use of this information by an operator during both normal and abnormal plant conditions,
- (b) integration into emergency procedures,
- (c) integration into operator training, and
- (d) other alarms during emergency and need for prioritization of alarms.

31. IJ.F.1, ATTACHMENT 1, MOBLE GAS EFFLUENT MONITOR

Noble gas effluent monitors shall be installed with an extended range designed to function during accident conditions as well as during normal operating conditions. Multiple monitors are considered necessary to cover the ranges of interest.

- Noble gas effluent monitors with an upper range capacity of 10⁵ uCi/cc (Xe-133) are considered to be practical and should be installed in all operating plants.
- (2) Noble gas effluent monitoring shall be provided for the total range of concentration extending from normal condition (as low as₅ reasonably achievable (ALARA)) concentrations to a maximum of 10⁵ uCi/cc (Xe-133). Multiple monitors are considered to be necessary to cover the ranges of interest. The range capacity of individual monitors should overlap by a factor of ten.

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The staff in an October 8, 1981, letter to the licensee found no technical deviations from the stated position. Therefore, the licensee is in compliance and this issue is closed.

32. II.F.1, ATTACHMENT 2 SAMPLING AND ANALYSIS OF PLANT EFFLUENTS

Because iodine gaseous effluent monitors for the accident condition are not considered to be practical at this time, capability for effluent monitoring of radioiodines for the accident condition shall be provided with sampling conducted by adsorption on charcoal or other media, followed by onsite laboratory analysis.

Changes to Previous Requirements and Guidance

This requirement was originally issued by letters to all operating power plants dated September 13, 1979, and October 30, 1979. This requirement was inadvertently omitted from NUREG-0660. Significant changes in requirements or guidance are:

- (1) Changes implementation date to January 1, 1982.
- (2) Specifies a shielding basis design envelope for design of samplers and sample transport devices.
- Specifies provisions for isokinetic sampling.
- (4) Specifies representative sampling per criteria of ANSI N131-1969.

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(5) Allows use of gamma radiation measurement and shielding/distance factors in lieu of analysis of highly radioactive samples.

The staff in an October 8, 1981, letter to the licensee found no technical deviations from the stated positions. Therefore, the licensee is in compliance and this issue is closed.

33. II.F.1, ATTACHMENT 3, CONTAINMENT HIGH-RANGE RADIATION MONITOR

In containment radiation-level monitors with a maximum range of 10⁸ rad/hr shall be installed. A minimum of two such monitors that are physically separated shall be provided. Monitors shall be developed and qualified to function in an accident environment.

This is an open item which requires additional staff review.

34. Item II.F.1, ATTACHMENT 4, CONTAINMENT PRESSURE MONITOR

A continuous indication of containment pressure shall be provided in the control room of each operating reactor. Measurement and indication capability shall include three times the design pressure of the containment for concrete, four times the design pressure for steel, and -5 psig for all containments.

This is an open item which requires additional staff review.

35. Item II.F.1, ATTACHMENT 5, CONTAINMENT WATER STYEL MONITOR

A continuous indication of containment water level shall be provided in the control room for all plants. A namow range instrument shall be provided for PWRs and cover the range from the bottom to the top of the containment sump. A wide range instrument shall also be provided for PWRs and shall cover the range from the bottom of the containment to the elevation equivalent to a 600,000 gallon capacity. For BWRs, a wide range instrument shall be provided and cover the range from the bottom to 5 feet above the normal water level of the suppression pool.

This is an open item which requires additional staff review.

36. Item II.F.1, ATTACHMENT 6, CONTAINMENT HYDROGEN MONITOR

A continuous indication of hydrogen concentration in the containment atmosphere shall be provided in the control room. Measurement capability shall be provided over the range of 0 to 10% hydrogen concentration under both positive and negative ambient pressure.

This is an open item which requires additional staff review.

37. Item II.F.2 INSTRUMENTATION FOR DETECTION OF INADEQUATE CORE COOLING

Licensees shall provide a description of any additional instrumentation or controls (primary or backup) proposed for the plant to supplement existing instrumentation (including primary coolant saturation monitors) in order to provide an unambiguous, easy-to-interpret indication of inadequate core cooling (ICC). A description of the functional design requirements for the system shall also be included. A description of the procedures to be used with the proposed equipment, the analysis used in developing these procedures, and a schedule for installing the equipment shall be provided. This item required that a subcooling meter be installed and level instrumentation.

The staff has reviewed the existing instrumentation in NUREG-0680, Supplement 3, and concluded that the licensee is in compliance.

With respect to new instrumentation, the staff has issued an Order on December 10, 1982, requiring the installation of inadequate core cooling instrumentation which conforms to item II.F.2 of NUREG-0737. This is under staff review.

38. Item II.G.1 EMERGENCY POWER FOR PRESSURIZER EQUIPMENT

Consistent with satisfying the requirements of General Design Criteria 10, 14, 15, 17, and 20 of Appendix A to 10 CFR Part 50 for the event of loss-of-offsite power, the following positions shall be implemented:

Power Supply for Pressurizer Relief and Block Valves and Pressurizer Level Indicators

- Motive and control components of the power-operated relief valves (PORVs) shall be capable of being supplied from either the offsite power source or the emergency power source when the offsite power is not available.
- (2) Motive and control components associated with the PORV block valves shall be capable of being supplied from either the offsite power source or the emergency power source when the offsite power is not available.
- (3) Motive and control power connections to the emergency buses for the PCRVs and their associated block valves shall be through devices that have beez gualified in accordance with safety-grade requirements.
- (4) The pressurizer level indication instrument channels shall be powered from the vital instrument buses. The buses shall have the capability of being supplied from either the offsite power source or the emergency power source when offsite power is not available.

The staff has reviewed this item in NUREG-0680, Supplement 3, and concluded that the licensee is in full compliance. The licensee's restart report 2.1.1.3 contains additional information.

39. Item II.K.1 IE BULLETINS

The staff has reviewed this bulletin in NUREG-0680 and NUREG-0680, Supplement 3, and concluded that the licensee is in compliance. The licensee's January 23, 1981, submittal contains technical references for all the II.K.1 items.

40. Item II.K.2.8 AUXILIARY FEEDWATER SYSTEM UPGRADING

All operating Babcock and Wilcox (B&W) plants were ordered to be shut down shortly after the TMI-2 accident. The orders included both short-term and long-term actions. The NRR Bulletins and Orders Task Force reviewed the licensees' compliance with the short-term actions of the orders and issued safety evaluation reports which served as the basis for plant restart. Additional items were identified in the review of the long-term actions which require further work by the licensees.

No separate implementation is required for this item. All auxiliary feedwater system upgrade modifications for B&W plants are being reviewed under Items II.E.1.1 and II.E.1.2.

41. Item II.K.2.9 FAILURE MODE EFFECTS ANALYSIS ON THE INTEGRATED CONTROL SYSTEM

For Babcock and Wilcox (B&W)-designed reactors provide a failure-modeand-effects analysis (FMEA) of the integrated control system (ICS).

The staff has reviewed this item in NUREG-0680, Supplement 3, and issued a supplemental Safety Evaluation Report on August 2, 1982, closing out this item. Supplement 1 to the licensee's restart report contains additional information.

42. Item II.K.2.10 SAFETY-GRADE ANTICIPATORY REACTOR TRIP

For Babcock and Wilcox (B&W)-designed reactors, install safety-grade, anticipatory reactor trip (ART) on loss-of-feedwater and turbine trip.

The staff has reviewed in item in NUREG-0680 and concluded that the design is in conformance with the design criteria and subject to successful results from the reactor protection system checkout procedure. The licensee's restart report 2.1.1.1 and 1.1.2.1 contains additional information. 43. Item II.K.2.11 OPERATOR TRAINING, DRILLING

This item is identified as complete in Enclosure 1 to NUREG-0737 and closed for TMI-1 per the August 9, 1979, Order.

44. Item II.K.2.13 THERMAL MECHANICAL REPORT--EFFECT OF HIGH-PRESSURE INJECTION ON VESSEL INTEGRITY FOR SMALL-BREAK LOSS-OF-COOLANT ACCIDENT WITH NO AUXILIARY FEEDWATER

A detailed analysis shall be performed of the thermal-mechanical conditions the reactor vessel during recovery from small breaks with an extended loss all feedwater.

The staff has reviewed this item in their April 22, 1981, SERs presented before the Board, and concluded that the licensee is in compliance with this item. The licensee's February 23, 1981, submittal contains additional information.

45. Item II.K.2.14 LIFT FREQUENCY OF PORVS AND SAFETY VALVES

This item has been subsumed under II.K.3.2.

46. Item II.K.2.15 EFFECTS OF SLUG FLOW ON STEAM GENERATOR TUBES

Although the staff believed that the potential for slug flow was not great in Babcock and Wilcox (B&W) plants because of the venting path provided by the internal vent valves, the staff required that a confirmatory evaluation of the effects of slug flow on steam generator tubes be performed by the licensees to assure that the tubes could withstand any mechanical loading which could result from slug flow.

The staff has reviewed this item and concluded that this item is resolved in a February 9, 1981, letter to the licensee. The licensee's 6/30/80 submittal contains additional information.

47. Item II.K.2.16 REACTOR COOLANT PUMP SEAL DAMAGE

Evaluate the impact of reactor coolant pump seal damage and leakage due to loss-of-seal cooling upon loss of offsite power. If damage cannot be precluded, licensees should provide an analysis of the limiting small-break loss-of-coolant accident (LOCA) with subsquent reactor coolant pump (RCP) seal damage.
The staff has reviewed this item in their April 22, 1981, SERs presented before the Board, and concluded that the licensee adequately addressed our concerns and that the requirements of this item have been met. The licensee's 6/30/80 submittal contains additional information.

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48. Item II.K.2.17 POTENTIAL FOR VOIDING IN THE REACTOR COOLANT SYSTEM DURING TRANSIENTS

Analyze the potential for voiding in the reactor coolant system (RCS) during anticipated transients.

The staff issued B&W generic SERs, in December 1981, to all B&W plants (except TMI-1) which concludes that the plant design is adequate to accomodate anticipated operational transients without causing unacceptable voiding in the RCS, thus closing out this item. It is expected that TMI-1 will also receive a close-out letter in the near future.

49. Item II.K.2.19 BENCHMARK ANALYSIS OF SEQUENTIAL AFW FLOW

All B&W licensees should provide a benchmark analysis of sequential auxiliary feedwater flow to the steam generators following a loss of main feedwater using a 3 node CRAFT 2 OTSG representation.

The staff has reviewed this item in their March 2, 1981, letter to the licensee and concluded that his item is closed. The licensee's June 30, 1980, submittal contains additional information.

50. Item II.K.2.20 SMALL-BREAK LOSS-OF-COOLANT ACCIDENT WHICH REPRESSURIZES THE REACTOR COOLANT SYSTEM TO THE POWER-OPERATED RELIEF VALVE SETPOINT

Provide an analysis which shows the plant response to a small-break loss-of-coolant accident (LOCA) during which the reactor coolant system (RCS) is repressurized to the power-operated relief valve (PORV) setpoint with subsequent failure of the PORV to close.

The staff has reviewed this item in their April 22, 1981, SERs presented before the Board, and concluded that the licensee has met the requirements for this item. The licensee's June 30, 1980, submittal contains additional information.

51. Item II.K.3.1 INSTALLATION AND TESTING OF AUTOMATIC POWER-OPERATED RELIEF VALVE ISOLATION SYSTEM

All PWR licensees should provide a system that uses the PORV block valve to protect against a small-break loss-of-coolant accident. This system will automatically cause the block valve to close when the reactor coolant system pressure decays after the PORV has opened. Justification should be provided to assure that failure of this system would not decrease overall safety by aggravating plant transients and accidents.

Each licensee shall perform a confirmatory test of the automatic block valve closure system following installation.

The review of this item is dependent on the conclusions reached in the review of Item II.K.3.2.

- 52. Item II.K.3.2 REPORT ON OVERALL SAFETY EFFECT OF POWER-OPERATED RELIEF VALVE ISOLATION SYSTEM
 - (1) The licensee should submit a report for staff review documenting the various actions taken to decrease the probability of a smallbreak loss-of-coolant accident. (LOCA) caused by a stuck-open poweroperated relief valve (PORV) and show how those actions consitute sufficient improvements in reactor safety.
 - (2) Safety-valve failure rates based on past history of the operating plants designed by the specific nuclear steam supply system (NSSS) vendor should be included in the report submitted in response to (1) above.

This item is under review by the staff. The licensee's April 6, 1981, submittal contains additional information.

53. Item II.K.3.3 REPORTING SAFETY VALVE AND RELIEF VALVE FAILURES AND CHALLENGES

The staff has reviewed this item in their April 22, 1981, SERs presented before the Board, and concluded that the licensee has met the requirements. The licensee's January 18, 1980, submittal contains additional information.

54. Item II.K.3.5 AUTOMATIC TRIP OF REACTOR COOLANT PUMPS DURING LOSS-OF-COOLANT ACCIDENT

Tripping of the reactor coolant pumps in case of a loss-of-coolant accident (LOCA) is not an ideal solution. Licensees should consider other solutions to the small-break LOCA problem (for example, an increase in safety injection flow rate). In the meantime, until a better solution is found, the reactor coolant pumps should be tripped automatically in case of a small-break LOCA. The signals designated to initiate the pump trip are discussed in NUREG-0623. The staff has reviewed this item and on March 4, 1983, sent a letter to the licensee requesting plans and schedules for resolution of this item within 60 days. The staff is not requiring a formal submittal of analyses which support either reactor coolant pump trip setpoints or the decision to leave the reactor coolant pump trips operational for all events. This letter consequently closes Item II.K.3.5.

55. Item II.K.3.7 EVALUATION OF POWER-OPERATED RELIEF VALVE OPENING PROBABILITY DURING OVERPRESSURE TRANSIENT

Most overpressure transients should not result in the opening of the power-operated relief valve (PORV). Therefore, licensees should document that the PORV will open in less than 5% of all anticipated overpressure transients using the revised setpoints and anticipatory trips for the range of plant conditions which migh occur during a fuel cycle.

This item is subsumed under II.K.3.2.

56. Item II.K.3.17 REPORT ON OUTAGES OF EMERGENCY CORE-COOLING SYSTEM LICENSEE REPORT AND PROPOSED TECHNICAL SPECIFICATION CHANGES

Several components of the emergency core-cooling (ECC) systems are permitted by technical specificatons to have substantial outage times (e.g., 72 hours for one diesel-generator; 14 days for the HPCI system). In addition, there are no cumulative outage time limitations for ECC systems. Licensees should submit a report detailing outage dates and lengths of outages for all ECC system for the last 5 years of operation. The report should also include the causes of the outages (i.e., controller failure, spurious isolation).

The staff has reviewed this item in a February 24, 1982, SER to the licensee and concluded that there is no need for cumulative ECCS outage requirements in TMI-1 and that the requirements of this item have been met. The licensee's October 20, 1980, submittal contains additional information.

57. Item II.K.3.30 REVISED SMALL-BREAK LOSS-OF-COOLANT-ACCIDENT METHODS TO SHOW COMPLIANCE WITH 10 CFR PART 50, APPENDIX K

The analysis methods used by nuclear steam supply system (NSSS) vendors and/or fuel suppliers for small-break loss-of-coolant accident (LOCA) analysis for compliance with Appendix K to 10 CFR Part 50 should be

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revised, documented, and submitted for NRC approval. The revisions should account for comparisons with experimental data, including data from the LOFT Test and Semiscale Test facilities.

This item is under review by the staff. In the April 22, 1981, SER presented before the Board, the staff concluded that the licensee has met the requirements of this item for the restart of TMI-1. The licensee's October 20, 1980, submittal contains additional information.

58. Item II.K.3.31 PLANT-SPECIFIC CALCULATIONS TO SHOW COMPLIANCE WITH 10 CFR PART 50.46

Plant-specific calculations using NRC-approved models for small-break loss-of-coolant accidents (LOCAs) as described in item II.K.3.30 to show compliance with 10 CFR 50.46 should be submitted for NRC approval by all licensees.

This item is not required to be completed until one year after staff approval of the generic model under II.K.3.30.

59. Item III.A.1.1 EMERGENCY PREPAREDNESS, SHORT TERM

The staff has reviewed this item in NUREG-0680 and concluded that the licensee is in compliance. The staff requires that a test exercise of the emergency plan be made prior to restart. The licensee's restart report section 4 contains additional information.

60. Item III.A.1.2 UPGRADE EMERGENCY SUPPORT FACILITIES

This item was subsumed into Supplement 1 of NUREG-0737 and the schedule for completion is being negotiated with the Project Manager.

61. Item III.A.2 IMPROVING LICENSEE EMERGENCY PREPAREDNESS--LONG-TERM

Each nuclear facility shall upgrade its emergency plans to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Specific criteria to meet this requirement is delineated in NUREG-0654 (FEMA-REP-1), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparation in Support of Nuclear Power Plants."

The licensee is to submit a radiological emergency response plan and implementing procedures.

- 62. Item III.A.2.1 UPGRADE EMERGENCY PLANS TO APPENDIX E, 10 CFF. PART 50 This is an open item and is under staff review.
- 63. III.A.2.2 METEOROLOGICAL DATA

This item was subsumed into Supplement 1 of NUREG-0737 and the schedule for completion is being negotiated with the Project Manager.

64. Item III.D.1.1 INTEGRITY OF SYSTEMS OUTSIDE CONTAINMENT LIKELY TO CONTAIN RADIOACTIVE MATERIAL FOR PRESSURIZED-WATER REACTORS AND BOILING-WATER REACTORS

Applicants shall implement a program to reduce leakage from systems outside containment that would or cculd contain highly radioactive fluids during a serious transient or accident to as-low-as-practical level. This program shall include the following:

- (1) Immediate leak reduction
 - (a) Implement all practical leak reduction measures for all systems that could carry radioactive fluid outside of containment.
 - (b) Measure actual leakage rates with the system in operation and report them to the NRC.
- (2) Continuing Leak Reduction -- Establish and implement a program of preventive maintenance to reduce leakage to as-low-as-practical levels. This program shall include periodic integrated leak tests at intervals not to exceed each refueling cycle.

The staff has reviewed this item in NUREG-0680, Supplement 3, and concluded that the licensee's proposed leak reduction program meets the requirements of this item. Section 2.1.1.8 of the licensee's restart report contains additional information.

- 65. Item III.D.3.3 IMPROVED INPLANT IODINE INSTRUMENTATION UNDER COLDENT CONDITIONS
 - Each licensee shall provide equipment and associated training and procedures for accurately determining the airborne iodine concentration in areas within the facility where plant personnel may be present during an accident.
 - (2) Each applicant for a fuel-loading license to be issued prior to January 1, 1981 shall provide the equipment, training, and procedures necessary to accurately determine the presence of airborne radioiodine in areas within the plant where plant personnel may be present during an accident.

The staff has reviewed this item in NUREG-0680, Supplement 3, and concluded that the licensee provided adequate information regarding training and procedures for determining airborne radioiodine concentration in the technical support center and control room. Sections 2.1.2.1.1 and 7.3.5.3 of the licensee's restart report contain additional information.

66. Item III.D.3.4 CONTROL-ROOM HABITABILITY REQUIREMENTS

In accordance with Task Action Plan item III.D.3.4 and control room habitability, licensees shall assure that control room operators will be adequately protected against the effects of accidental release of toxic and radioactive gases and that the nuclear power plant can be safely operated or shut down under design basis accident conditions (Criterion 19, "Control Room," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 56).

This item is under review by the staff. An SER is expected in June 1983. The licensee's October 2C, 1980, and July 16, 1982, submittals contain additional information.

APPENDIX C



UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

April 15, 1983



FROM: Darrell G. Eisenhut, Director Division of Licensing

Project and Resident Programs, Region I

SUBJECT:

TMI-T RESTART ISSUES TASK FORCE

As agreed by your management, you are assigned as a member of the subject task force. The purpose of the group is twofold. First, the group should verify that the NRC requirements for restart are correctly identified -specifically, that the certification list is (1) complete and (2) correctly interprets the original NRC requirement. The sucond purpose of the group is to verify that TMI-I has been treated similar to all other operating plants for other NRC requirements (i.e., that there were no requirements applied to other operating plants that were not applied to TMI-1, by omission, due to its status, and that for any given issue, their response to NRC requirements with regard to general scope and schedules is generally acceptable relative to the NRC position applied to other operating plants.)

The raview should encompass all relevant areas, including, but not limited to, certification items, regional items, NUREG-0737 items, inspection reports, procedural issues (e.g., psychological stress), LER's, OI reports, IE Bulletins, Baw generic issues, and other plant specific or generic issues that may have resulted in prerequisites or conditions for facility restart.

The final product of this effort is to be a report that is to be issued by April 29, 1983. Therefore, your participation will necessarily be on a full-time basis. The group will be headed by Mark Williams (X28285).

Richard Starostecki, Director Division of Project and Resident Programs Region I

ion won Darrell G. Eisenhut, Director Division of Licensing