



**The Secretary of Energy**  
Washington, DC 20585

91:1794

August 2, 1991

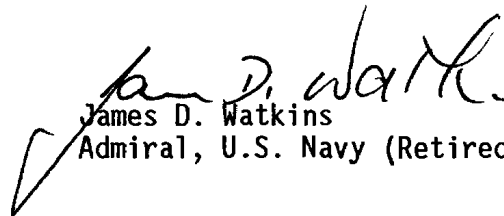
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DNF SAFETY BOARD

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W.  
Suite 700  
Washington, D.C. 20004

Dear Mr. Conway:

In my letter to you of May 14, 1991, I accepted the Defense Nuclear Facilities Safety Board Recommendation 91-2, dated March 27, 1991. This recommendation suggested a modification to the process used to resolve issues contained in the Westinghouse Savannah River Company Reactor Operations Management Plan for restart of the K-Reactor. Enclosed is the Department of Energy's plan for implementing this recommendation.

Sincerely,

  
James D. Watkins  
Admiral, U.S. Navy (Retired)

Enclosure

IMPLEMENTATION PLAN FOR SAVANNAH RIVER SITE K-REACTOR  
RESTART ISSUE CLOSURE PROCESS

1.0 INTRODUCTION

1.1 Purpose

On March 27, 1991, the Defense Nuclear Facilities Safety Board (DNFSB) recommended to the Secretary of Energy that the Department of Energy (DOE) modify the process for resolving safety issues in the Reactor Operations Management Plan (ROMP) for the K-Reactor at the Savannah River Site. Specifically, the DNFSB recommended in Recommendation 91-2:

- "1. That each closure package of an issue in the ROMP be provided with a brief narrative discussion that clarifies the meaning of the issue, describes the steps that were taken to resolve it, states the reason for concluding that closure has been achieved, and shows how the referenced documents support the claim of closure,
2. That the DOE revert to its earlier plan to fully review and concur with the determinations of each issue closure."

The Secretary of Energy accepted the Board's Recommendation 91-2 on May 14, 1991. This plan describes how this recommendation will be implemented.

1.2 Background

The operating contractor in June 1989 assembled the principal safety issues required to be resolved prior to restart in the Westinghouse Savannah River Company (WSRC) ROMP, WSRC-RP-89-368. The current version of the ROMP (Revision 5, issued November 5, 1990) contains the principal safety issues identified through numerous past reviews by a number of organizations, including in-house groups of the DOE, a committee of the National Research Council of the National Academies of Science and Engineering, the Operating Contractor, the Restart Issues Management Program (RIMP) process, and the ongoing emerging issue process.

The following paragraphs describe the process by which the ROMP issues were being closed out at the time of the DNFSB recommendation.

Charlotte Criteria and Westinghouse Independent Safety Review (WISR) restart work items contained in the ROMP were to be closed by WSRC line management, followed by review of WSRC internal oversight organizations. Final approval was to be given by the WSRC Reactor Restart Division (RRD) Vice President and General Manager. This process is defined in Special Procedure SP-399-4, "Reactor Restart Closure Process" (Enclosure 1). Copies of these closure packages were provided to DOE for review.

The 41 Quality Assurance (QA)-related restart work items that are identified in the ROMP were to undergo closure via the following method. Personnel from the WSRC Reactor Restart QA organization were to prepare closure packages in accordance with the requirements of RQPT-I-003, "Control of RQPT Closure Packages" (Enclosure 2). As part of this process, personnel from the WSRC RRD organization were to conduct surveillances to ensure that the acceptance criteria identified in the ROMP were satisfied and that required deliverables were complete. Completed closure packages were to be approved by the Reactor QA (RQA) Manager. DOE was to be notified that the packages were available for review and closeout. DOE personnel from the Savannah River Restart Special Projects Office (SRSPPO) Safety Oversight Division (SOD) were to review the closure packages. Final DOE approval of closure of the QA ROMP packages was to be documented in the SOD Monthly Report and section 3.0 of the Safety Evaluation Report (SER), as appropriate.

Other major components of the ROMP, including implementation of outage work, relevant items from the DOE SER, other DOE requests, and relevant Issue Management Committee decisions, were to be closed by the WSRC RQA and Assessment Department's Operational Readiness Review (ORR) group in accordance with the requirements of the ORR Plan (OPS-SAM-890008) and the ORR Procedure (OPS-SAM-890009). Copies of these documents are provided in Enclosures 3 and 4.

The WSRC Operational Readiness Evaluation Program provide an independent evaluation of restart readiness. This team was to sample Charlotte Criteria, WISR and other ROMP deliverables, and evaluate the effectiveness of the WSRC ORR process.

As a final check of the adequacy of the closure process, the DOE ORR was to review reactor restart closure programs. This was to include, on a sampling basis, assessment of the implementation of programs and closure of issues within the SER and ROMP.

This was the process as it existed prior to the DNFSB recommendation. The Department and WSRC will modify this in order to provide standardized closure narratives and facilitate independent review as described in the DOE response to the individual DNFSB recommendations. This augmentation is described in sections 2 and 3, below.

## 2.0 PROGRAM DESCRIPTION

### 2.1 Scope

The scope of the ROMP closure process involves all restart-required work items contained in Revision 5 of the WSRC ROMP issued November 5, 1990, as shown in the contents section of Volume 2, pages 1 through 11. This includes 142 items originated from Charlotte Criteria and WISR, 41 QA related items, 55 Issues Management originated items and 51 SER (SE) items. This listing is provided as Enclosure 5. Closure packages typically consolidate a number of ROMP work items into a single closure

package. The total number of packages to be submitted will be approximately 250.

## 2.2 ROMP Closure Process Objectives

The objective of the ROMP closure process is to document the technical rationale for concluding that the actions taken by WSRC and DOE regarding the principal safety issues required to be resolved in connection with restart of K-Reactor have been effectively implemented and have produced the desired objective. The process is to be carried out in a manner that facilitates independent review and clearly documents DOE review and concurrence on each safety issue.

## 2.3 Detailed Technical Approach

This section describes the operating contractor's process for developing ROMP closure packages and the DOE process for review and concurrence of those closure packages.

### 2.3.1 ROMP Closure Package Preparation

The process by which WSRC prepares closure packages, as described in section 1.2 of this implementation plan, will remain the same; however, each closure package will be augmented with a closure narrative. A dedicated group has been established within WSRC RRD to accomplish this goal. A closure narrative manager has been assigned within the WSRC Reactor Restart Technical Department who will be responsible for developing the closure narratives consistent with the established closure processes and schedules. Engineers and support personnel are assigned to this manager to gather the necessary information, to author the closure narratives, to obtain approval from cognizant engineers and managers, and to assist in resolution of comments from DOE or DNFSB. In addition, support is being provided by the WSRC Closure Group, the Readiness Assessments Section, the Reactor QA Section, and the Nuclear Safety Section.

Additional engineers, part of a task team within RRD to assist various closure activities, are supporting the closure narrative manager in the effort to develop closure narratives for ROMP issues which are already closed per WSRC procedures.

Line organizations throughout RRD, Savannah River Laboratory, Engineering and Projects Division, and elsewhere in WSRC will be called upon, as necessary, to obtain information not available in closure files, and to review and approve the closure narratives prepared by the closure narrative group.

Closure packages have already been prepared by WSRC for some ROMP issues. A closure narrative is being prepared for each of the closed issues and submitted for DOE review and concurrence. For ROMP issues not yet closed, WSRC will proceed with closure using the established closure processes and schedules. A closure narrative will be prepared

and submitted with each closure package for DOE review and approval. Certain ROMP issues have been combined into single closure narratives because they are related. Examples are (1) SE-5.2 and MS-19, each of which address implementation of WSRC's Unreviewed Safety Question process; and (2) QA items in ROMP which combine to establish a QA program consistent with the intent of national standards for such programs. When a single closure narrative is prepared for multiple issues not yet submitted to DOE, a separate copy of the combined narrative will be provided with each of the closure packages covered by the narrative.

### 2.3.2 DOE Review and Concurrence of ROMP Closure Packages

The procedure for DOE review and concurrence of ROMP closure packages is specified in SRSP0 Administrative Instruction AI-1, Reactor Restart Program Management Plan, Revision 2, dated April 1, 1991 (Enclosure 6). This process is summarized as follows:

The Director, SRSP0, identifies divisions which are responsible for the oversight of the activities identified by the ROMP and the SER. Each SRSP0 Division Director then assigns cognizant engineers to oversee each of the specific areas of responsibilities which fall under the purview of his/her respective division. It is the cognizant engineer's responsibility to staff the ROMP closure and to prepare the appropriate correspondence when satisfied the package is adequate for approval.

At the request of the Director, SRSP0, some ROMP closure packages may be sent to the Office of Processing and Reactor Facilities (OPRF) for DOE review and concurrence. These packages will follow the same closure process as those closed by SRSP0 cognizant engineers.

ROMP items will be considered closed when the following actions are verified by the SRSP0 Cognizant Engineer:

1. A ROMP closure package and closure narrative will be approved when it demonstrates that the work scope required by the restart item has been completed satisfactorily. Requirements affecting closure are listed below:
  - All deliverables are consistent with the SER criteria, or other applicable requirements.
  - The ROMP closure narrative provides a brief narrative discussion that clarifies the meaning of the issue, describes the steps that were taken to resolve it, states the technical reasons for concluding that closure has been achieved, and shows how the referenced documents support the claim of closure. If the closure document has been superseded by later revisions due to disapproval by DOE, the closure narrative documents the issues and changes that were involved.

- If implementation reviews are appropriate to the item, the approval should assure that the implementation review is coordinated within the framework of an existing restart program such as the ORR or SER implementation review.
- If circumstances have changed so that the restart item is no longer appropriate, or if significant and substantive changes were made to the restart item, the approval action should verify that the basis for the change is included in the contractor's closure narrative and is acceptable to DOE.

2. The concurrence action will take the form of a letter to the contractor for the Director's signature which provides the basis for the DOE approval. Where an SER section or a monthly report provides sufficient documentation, it can be attached to a short letter as the approval action. The Deputy Director is delegated approval authority for ROMP closure package approvals.

Final action by the SRSP0 Cognizant Engineer will be the completion of a RAIL closure form which is to be sent to the appropriate SRSP0 organization (Attachment 7.4 of SRSP0 Administration Guideline AG-157, Action Item Tracking System and Closure Process, Revision 1, dated April 1, 1991), along with a copy of the approval letter.

### 3.0 ADMINISTRATION OF THE PROGRAM

#### 3.1 Responsibilities

The principal operating contractor responsibility for ROMP closure is assigned to the Vice President and General Manager, RRD, WSRC. Day-to-day management, reporting, tracking, and accuracy of technical content of the program is delegated to the Reactor Restart Technical Director. The Director, SRSP0 is responsible for establishing the DOE process for review and concurrence of the ROMP closure package and closure narrative. The Deputy Director, SRSP0, is delegated authority for approval of the closure packages and closure narratives.

#### 3.2 Project Management Plan

This implementation plan serves as the Project Management Plan in accordance with DOE Order 4700.1, Project Management System.

#### 3.3 Quality Assurance Plan

This implementation plan will be carried out in accordance with SRSP0 Administrative Instruction AI-110, QA and WSRC-1Q, WSRC QA Manual.

Four specific provisions will assure that the closure narratives provided by WSRC are quality products.

- a. The ROMP "deliverables" are prepared as part of WSRC's established workscope which is controlled by the established management control and QA procedures. These include the site-wide Management Procedures and Requirements (MPRs), the RD-1 Manual, individual department QA procedures, and RRD QA procedures. This control assures that the basic products of the restart program, upon which the narratives are based, are of the desired high level of quality.
- b. The closure of each ROMP issue requires independent verification that the "deliverables" specified in ROMP are complete. For Charlotte/WISR items, the closure process is defined in Special Procedures SP-399-4 "Reactor Restart Closure Process" (Enclosure 1). For QA items, the closure process is defined in RQPT-1-003, "Control of RQPT Closure Packages" (Enclosure 2). For other ROMP items, (OW, DO, IM, and SE) the closure process is defined in ORR Procedure, OPS-SAM-890009 (Enclosure 4). These closure processes further assure that the ROMP requirements have been met for each deliverable.
- c. The closure narrative prepared pursuant to Recommendation 91-02 will be prepared to reflect the completed, quality-assured deliverables discussed in (a) and (b) above. The approval process for each closure narrative requires sign-off by the Cognizant Engineer (if appropriate), Cognizant Manager, and responsible Department Manager. These individuals will concur and sign the closure narrative only after they are satisfied that it is accurate and properly characterizes the ROMP issue and its closure.
- d. The preparation of closure narratives has been assigned to a senior WSRC manager. He/she will review each closure narrative to assure that it contains the information identified in DNFSB's recommendation and that the technical logic of issue closure is clear. He/she will also assure consistency. When satisfied that the closure narrative is adequate, the closure narrative manager will recommend approvals/sign-off by the Vice President and General Manager of RRD. When satisfied that it is adequate, the Vice President and General Manager or his/her designee will sign the narrative.

In addition to these efforts, SRRO will sample the ROMP closure packages approved by SRSP0 to provide further assurance that the closure process has been adequately performed.

These four measures, along with the SRRO review, will assure that the closure narratives are of consistent high quality, reflecting proper closure of the ROMP issue.

#### 4.0 DOCUMENTS TO BE SUBMITTED TO DNFSB AND SCHEDULE

The DNFSB will be provided copies of closure packages, closure narratives, and documentation of the DOE review and concurrence following the DOE review process. The audit report conducted by SRRO on the effectiveness of the process will be provided to the DNFSB. The DNFSB will also be provided copies of the DOE ORR reports which shall contain documentation of the ORR's evaluation of the closure package process.

As of July 2, 1991, 52 ROMP closure packages with closure narratives have been submitted to the DNFSB. All ROMP closure packages will be transmitted to the DNFSB before restart of the reactor.

#### 5.0 ENCLOSURES

The following documents that are associated with the overall ROMP closure process are attached as enclosures:

1. WSRC SP-399-4, Reactor Restart Closure Process (U).
2. WSRC RQPT-I-003, Control of RQPT Closure Packages.
3. WSRC OPS-SAM-890008, Reactor Restart Operational Readiness Review Plan.
4. WSRC OPS-SAM-890009, Reactor Restart Operational Readiness Review Procedure.
5. Listing of all ROMP Items.
6. SRSPO AI-1, Reactor Restart Program Management Plan.





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## REACTOR RESTART CLOSURE PROCESS (U)

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### 1.0 PURPOSE:

SEE TABLE II

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To establish a system of clearly defined controls and responsibilities for documenting closure of K-Reactor Restart Strategy and Westinghouse Independent Safety Review (WISR) recommendations referenced within the scope of the "Reactor Operations Management Plan", (WSRC-RP-89-368).

To organize closure documentation in a master file system to facilitate ready availability/access to independent review(s) and or verification(s).

### 2.0 SCOPE:

This procedure is applicable to closure of all activities as specified in the SRS Reactor Operations Management Plan (ROMP) and additions to that plan. The restart work items which address the K Reactor Restart Strategy (Charlotte) and Westinghouse Independent Safety Review form the foundation of the restart effort. Each Charlotte "Issue" and WISR recommendation shall have a closure package developed and organized to document evidence of implementation and to facilitate management review. It is not the intent of this procedure to address a closure process for other Operations and Projects items which will be completed but are not included within the Reactor Operations Management Plan. Such items will be closed by Operational Readiness Review (ORR), (OPS-SAM-89-0008). It is also not the intent of this procedure to address a closure process for those issues which do not result in restart scope. These are dispositioned by the Reactor Issue Management Process. It is also not the intent of this procedure to address closure of DOE Requests (DO), Technical Vigilance (TV), Issue Management (IM), Safety Evaluation Report (SE), and Outage Work (OW) issues. This procedure assumes that scope and acceptance criteria have been developed, approved, and documented in the ROMP Appendix.

Certain technical issues under the responsibility of the Reactor Restart Technical Director will be designated as requiring independent technical peer review. Results of these reviews will be documented in the closure packages associated with these issues.

### **3.0 RESPONSIBILITIES:**

#### **3.1 WSRC Line Organizations will:**

- 3.1.1** Oversee all tasks through completion to ensure that acceptance criteria have been satisfied and deliverables are available.
- 3.1.2** Transmit restart work item deliverables as appropriate to Reactor Quality Assurance and Assessments-Reactor Restart Verification (RRV), Reactor Safety Evaluation Section (RSES), DOE for review and approval, and the Reactor Restart Master File for information purposes.
- 3.1.3** Maintain a resolution of comments record for inclusion in closure packages.
- 3.1.4** Prepare organized closure packages to facilitate management review. Closure packages shall be developed for all issues where responsibility is assigned per Table 1.
- 3.1.5** Notify independent verification/assessment organizations that activities to verify acceptance criteria compliance with Charlotte "Issues" and WISR recommendations can be initiated (i.e., deliverables are accessible; field implementation has been initiated, completed, or meet acceptance criteria; and the issues are considered ready for final closure).
- 3.1.6** Disposition and document resolution of all RRV surveillance report deviations, and RSES non-concurrences.
- 3.1.7** Ensure that corrective actions to surveillance deviations and RSES non-concurrences satisfy time restraints for response, and that responses are acceptable to gain closure concurrence from these assessment organizations.

3.1 WSRC Line Organizations will (CONTD):

- 3.1.8 Formally notify RRV, RSES, and DOE of any changes in the final product(s) which satisfy Charlotte "Issues" and WISR recommendations after independent verifications have been provided indicating concurrence. This also pertains to revisions of RDSI's, etc. which are deliverables contained in previously closed issues.
- 3.1.9 Forward copies of completed deliverables to the appropriate closure coordinator.
- 3.2.0 Verify review of the Safety Analysis Report (SAR) against the context of each closure issue has been made and that recommendations are documented which define SAR impact.

3.2 Reactor Restart Verification will:

- 3.2.1 Verify that acceptance criteria for each restart work item within closure packages have been satisfied.
- 3.2.2 Verify satisfactory implementation of work scope deliverables (i.e., administrative controls, training, work practices, etc.) in the field.
- 3.2.3 Issue surveillance reports documenting independent verification assessments of closure packages.
- 3.2.4 Coordinate surveillance activities in alignment with the restart schedule and surveillance notification requests from line organizations so that surveillance activities will not be initiated before tasks are completed and field implementation has been initiated.
- 3.2.5 Monitor for delinquent Corrective Action Responses (CARs) and inform line organization management of the urgency to submit these responses so that closure can be expedited.

3.3 Reactor Safety Evaluation Section-ORE will (As Defined In The ORE Plan):

- 3.3.1 Verify that acceptance criteria for each issue have been satisfied.
- 3.3.2 Verify satisfactory implementation of work scope deliverables (i.e., administrative controls, training, work practices, etc.) in the field.
- 3.3.3 Provide, through their review, an independent operational readiness evaluation.
- 3.3.4 Coordinate activities in alignment with the restart schedule and line organization assessment notification requests so that independent assessments will not be initiated before tasks are completed and field implementation has been initiated.
- 3.3.5 Issue reports documenting recommendations, non-concurrences, and concurrence of all line organization products within closure packages.
- 3.3.6 Verify review of the SAR against the context of each closure issue has been made and that recommendations are documented which define SAR impact.

3.4 WSRC Closure Coordinators will:

- 3.4.1 Serve as resources to ensure alignment of those organizations engaged in satisfying Charlotte Issues through closure.
- 3.4.2 Track progress of deliverables to ensure timely development, review by appropriate organizations, implementation, and availability for verification/assessment.
- 3.4.3 Assist line organizations as requested in the preparation of closure packages.

### 3.4 WSRC Closure Coordinators will (CONTD):

- 3.4.4 Initiate escalation of unresolved concerns (i.e. outstanding concerns that might delay issue closure) to the proper management level within affected organizations as necessary to obtain timely resolution(s).
- 3.4.5 Verify review of the SAR against the context of each closure issue has been made and that recommendations are documented which define SAR impact.
- 3.4.6 Ensure that all documentation to support issue closure is placed in the master files.

### 3.5 REACTOR SAFETY CONTROLS GROUP will:

- 3.5.1 Provide an SAR assessment of each ROMP Issue and provide documentation to define SAR impact and support issue closure.

## 4.0 DEFINITIONS:

- 4.1 Closure Package: A document showing logic of events, evidence of development of a satisfactory customer product, verification of full implementation, and associated documentation.
- 4.2 Acceptance Criteria: Items or concerns (i.e., analyses, studies, documentation, testing, etc.) identified as specific issue requirements to be satisfied to ensure that sufficient margins of safety exist for restart and operation of SRS Reactors.
- 4.3 Deliverable: A product developed that is measurable and is designed to satisfy acceptance criteria.
- 4.4 Quality Verification: The process by which RRV evaluates whether closure packages satisfy acceptance criteria and QA Requirements.

#### **4.0 DEFINITIONS (CONTD):**

- 4.5 **RSES Evaluation:** The process by which the Reactor Safety Evaluation Section determines if acceptance criteria have been satisfied and provides recommendations to ensure operational readiness for reactor restart.

#### **5.0 PROCEDURE:**

- 5.1 Line organizations will verify that deliverables, deliverable scopes, and acceptance criteria for closure packages have been developed.
- 5.2 Line organizations will transmit developed deliverables to DOE for review and comments so that opportunity is provided for feedback on an ongoing basis of real time identification/resolution of problems and concerns. Refer to reference 8.4, "Deliverables Review and Comments Disposition Procedure".
- 5.3 A log of all comments and responses will be maintained. Refer to reference 8.4, "Deliverables Review and Comments Disposition Procedure."
- 5.4 A closure package will be developed by the line organization to provide evidence that the restart work items contained within the closure package have been completed and meet the acceptance criteria.
- 5.5 Refer to Table 2 for an explanation of closure package contents.
- 5.6 Line organizations should refer to Figure 1 for a guide to facilitate the closure process.
- 5.7 Ensure that all documentation required to support closure is forwarded to the restart master file per the document control requirements of reference 8.5.

## **5.0 PROCEDURE (CONTD):**

- 5.8 Line organizations will forward notifications of closure to RSES and RRV for independent verification/assessment of closure packages.
- 5.9 RRV and RSES will schedule surveillance and assessment activities through line organizations to ensure resources are available to present products, answer concerns, and discuss recommendations/observations for improvement.
- 5.10 Line organizations will disposition RRV deviations and RSES non-concurrences.
- 5.11 Line organizations will obtain signature approval from RRV establishing final closure of the package and a final closure summary from RSES after deviations and non-concurrences have been resolved.
- 5.12 Closure Coordinators will verify that SAR evaluations have been made against each restart issue specified in the scope of this procedure and that the SAR Impact Evaluation is referenced in each closure package. Verification will also be made to ensure that documentation defining SAR impact has been made available to the restart file to support closure.
- 5.13 Closure packages will then be forwarded to the VP and GM - Reactor Restart Division for signature approval.
- 5.14 Closure packages will then be forwarded to the DOE Special Projects Office for review.

## **6.0 RECORDS:**

- 6.1 A complete set of documents required to demonstrate successful implementation of the associated Restart Work Item Scopes will be referenced in the closure packages and maintained as permanent records (i.e., deliverables, references, DOE comments, RRV deviations, and RSES non-concurrences). Additional records of closure will be maintained in ORR Files.



## **6.0 RECORDS (CONTD):**

- 6.2 Information copies of restart records will be organized and stored in a Reactor Restart File to facilitate convenient access of review/verification by independent verification organizations.

## **7.0 TRAINING:**

- 7.1 All WSRC personnel involved with the development and approval of Reactor Restart Closure Documents will have a working knowledge of this procedure.
- 7.2 The method of self training through individual review of this procedure is considered adequate to satisfy quality requirements.
- 7.3 All training will be documented in compliance with the site QA Manual and with DPSP-87-1211, "Reactor Programs Standard Practice Manual", Sec. 2.

## **8.0 REFERENCES:**

- 8.1 "SRP K Reactor Restart Strategy", US DOE November, 1988- Charlotte Criteria.
- 8.2 "Reactor Operations Management Plan", (WSRC-RP-89-368).
- 8.3 DPSP-87-1211, "Reactor Programs Standard Practice Manual".
- 8.4 Reactor Restart Standing Practice SP-399-2, "Deliverables Review and Comments Disposition Procedure", REV. 2.
- 8.5 DPSOL 399-5, "Maintaining Reactor Restart Files", REV. 0.

**TABLE 1**  
**CLOSURE RESPONSIBILITY**

DB-1	OPERATING ENVELOPE	DICKSON
DB-2	SEISMIC	BERANEK
DB-3	REACTIVITY CONTROL/MONITORING	BERANEK
DB-4	FIRE PROTECTION	BERANEK
DB-5	POWER LIMITS	DICKSON
DB-6	BASELINE and PW INTEGRITY	DICKSON
HP-1	FIFTH SHIFT	RAHE
HP-2	DEGREED SUPERVISOR	RAHE
HP-3	TECHNICAL SUPPORT ENGINEER	BERANEK
HP-4	SHIFT ADVISOR	RAHE
HP-5	TRAINING METHODOLOGY	SAIN
HP-6	TRAINING INSTRUCTORS	SAIN
HP-7	TRAINING-OPERATIONS	SAIN
HP-8	TRAINING-OTHER	SAIN
MS-1	LOGKEEPING	RAHE
MS-2	TAG OUT / LOCK OUT	RAHE
MS-3	EQUIPMENT RELEASE and RETURN TO NORMAL	RAHE
MS-4	COMMUNICATIONS	RAHE
MS-5	PROCEDURE REVIEW/REVISIONS	SAIN
MS-6	SAFETY EQUIP. LIST and MAINTENANCE PROCEDURES	SAIN
MS-7	SHIFT TURNOVER	RAHE
MS-8	PROCEDURE SCHEMATICS and LINEUP	SAIN
MS-9	TEST CONTROL	RAHE
MS-10	HOUSEKEEPING	RAHE
MS-11	HEALTH PROTECTION	RAHE
MS-12	MANAGEMENT STRUCTURE	RANKIN
MS-13	MANAGEMENT INVOLVEMENT	RANKIN
MS-14	PROCEDURE COMPLIANCE and USAGE	RAHE
MS-15	CATEGORIZE BACKLOG	BERANEK
MS-16	RECORDS RETENTION-OPERATIONS	RAHE
MS-17	POST-TRIP ASSESSMENT	RAHE
MS-18	DOE APPROVAL of LINKING DOCUMENT	DICKSON
MS-19	UNREVIEWED SAFETY QUESTION	DICKSON
MS-20	COMMUNICATIONS (TECHNICAL)	DICKSON
MS-21	DESIGN CHANGE APPROVAL/CONTROL	BERANEK
MS-22	DESIGN BASIS TESTING CONTROL	DICKSON

**TABLE 1**  
**CLOSURE RESPONSIBILITY (CONTD)**

MS-23	ISSUE MANAGEMENT and RSIP	DICKSON
MS-24	STARTUP PROCEDURE	BERANEK
MS-25	RSES	DICKSON
MS-26	RSAC	DICKSON
MS-27	INPO ASSISTANCE	RANKIN
MS-28	ISEP-REVIEW of USQs	DICKSON
MS-29	OPERATING EXPERIENCE REVIEW	BERANEK
WISR-1	ECS ACTUATION FOLLOWING LOPA	BERANEK
WISR-2	ECS ACTUATION PROCEDURES	SAIN
WISR-4	LOCA PERFORMANCE TESTING (L FLOW-TEST)	BERANEK
WISR-5	MODERATOR RECOVERY SYSTEM (DB-2)	BERANEK
WISR-6	PUMP DEGRADATION TESTING	BERANEK
WISR-7	SUMP WATER REMOVAL CAPABILITY	BERANEK
WISR-8	VALVE INSPECTIONS	BERANEK
WISR-18	BATTERY TESTING and UPS	BERANEK
WISR-19	ESSENTIAL CORE MONITORING (DB-2)	BERANEK
WISR-21	SPURIOUS CONTROLS OPERATION	BERANEK
WISR-23	CORE EVALUATION RESPONSIBILITY	BERANEK
WISR-24	FUEL/TARGET MANUFACTURING	DICKSON
WISR-26	SAFETY MARGIN EVALUATION	DICKSON
WISR-27	STARTUP CORE TESTING	BERANEK
WISR-29	CONTROL ROOM INFORMATION (P&IDs)	BERANEK
WISR-31	OPERATIONAL ASSESSMENT	RANKIN
WISR-33	PLANT SITE ORGANIZATION	RANKIN
WISR-35	903 FAN DESIGN REVIEW	BERANEK
WISR-37	IMPROVED TRAINING & PROC.s-SEVERE ACCIDENTS	SAIN
WISR-38	LOPA EVENT FREQUENCY-CW LINE INSPECTIONS	BERANEK
WISR-39	INCREASED SURVEILLANCES	SAIN
WISR-45	PARTIAL LENGTH ROD DROP ANALYSIS	DICKSON
WISR-47	BASIS FOR POWER LEVEL (DB-5)	DICKSON
WISR-49	ASSIMILATION OF MASSIVE CHANGE	RANKIN

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**TABLE 2**  
**CLOSURE PACKAGE CONTENTS**

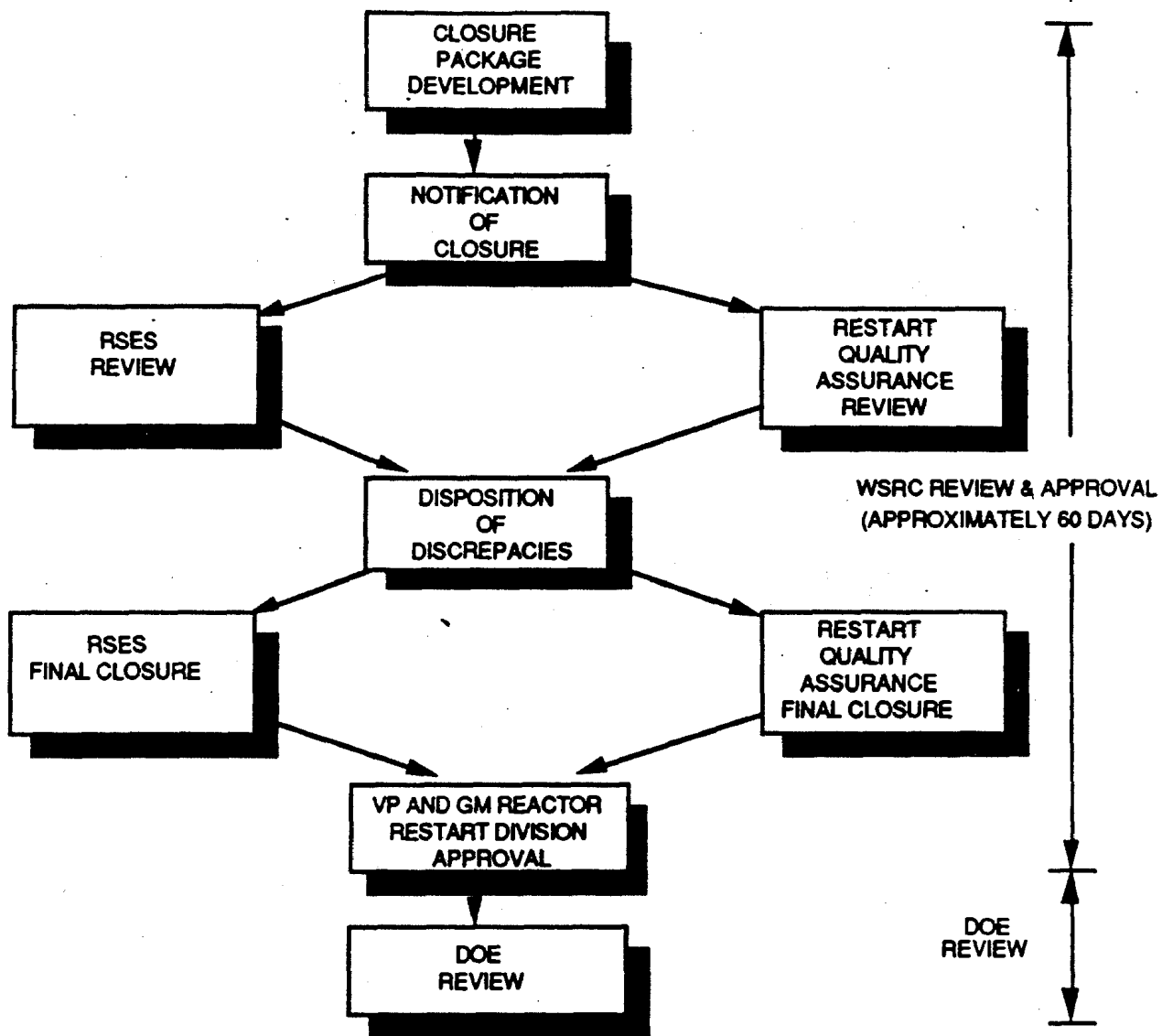
- I. Table of Contents: A listing to sequentially identify all documentation within the package and the total number of pages of each document.
- II. Issue Notice Of Closure: This is a form letter signed by the Line Manager responsible for closure and is to be forwarded to the VP and GM - Reactor Restart informing them that the criteria have been satisfied and their approval is requested.
- III. Issue Closure Summary: The summary is prepared by the line organization manager responsible for managing the task. It contains an overview of how the objectives were met and explains any anomalies identified during closure verification.
- IV. Reactor Restart Work Item Scope: Obtained from the Reactor Operations Management Plan. These data consist of 1) A statement of Charlotte requirements copied directly from the source document (K-Reactor Restart Strategy) or Westinghouse Independent Safety Review, 2) Issue Scopes, and 3) A list of deliverables developed.
- V. Reference Documents: Needed To Understand Deliverables. The Reactor Restart Master File will contain copies of all deliverables and key reference documents.
- VI. RSES And DOE Resolution Of Comments Reports: Reports showing disposition of DOE and RSES comments on assessments of deliverables to satisfy acceptance criteria.
- VII. Reactor Restart Verification (RRV) Surveillance Report and Corrective Action Responses: This summary report is included in the closure package after RRV has been notified of issue closure, the RRV review is made, and discrepancies have been dispositioned. This report will require signature approval from RRV verifying all discrepancies have been dispositioned satisfactorily.

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**CLOSURE PACKAGE CONTENTS (CONTD)**

- VIII. **Reactor Safety Evaluation Section (RSES) Issue Closure Summary Report:** This summary report is included in the closure package after RSES has been notified of issue closure, the RSES assessment is made, and discrepancies have been dispositioned. This report will require signature approval from RSES indicating all discrepancies have been dispositioned satisfactorily.

**FIGURE 1**  
**CHARLOTTE/WISR CLOSURE PROCESS**






WESTINGHOUSE  
SAVANNAH RIVER COMPANY

MANUAL: INSTRUCTION  
SECTION: RQPT-I-003  
PAGE: 1 OF 3  
EFFECTIVE DATE: 8/15/90  
ORG: REACTOR QUALITY  
PROJECT TEAM  
REVISION: 2

CONTROL OF RQPT CLOSURE PACKAGES  
CATEGORY 3

APPROVAL

  
MANAGER RRQA

DATE 8-15-90

1.0 PURPOSE

## INFORMATION ONLY

- 1.1 The purpose of this instruction is to provide direction and define the responsibilities for control of documentation and preparation of the closure packages for the the "Reactor Operations Management Plan (ROMP) QA Restart Work Items.

2.0 SCOPE

- 2.1 This instruction implements the process for the development and organization of closure files for Reactor Restart Quality Assurance (RRQA) work items related to the Quality Assurance acceptance criteria within the scope of the "Reactor Operations Management Plan", WSRC-RP-89-368.
- 2.2 This procedure is applicable to all RRQA personnel.

3.0 RESPONSIBILITIES

- 3.1 The RRQA Restart Item Lead will be responsible for the timely filing and closure action.
- 3.2 The RRQA Closure Coordinator will assist in the organization and placement of documentation associated with the RRQA closure files.
- 3.3 RRQA Record Clerk will provide the document control interface in accordance with RQPT-I-001, Document Control.
- 3.4 RRQA Managers will provide the direction and personnel to ensure proper documents are forwarded to the RRQA Closure Coordinator.
- 3.5 Reactor Restart Verification (RRV) Personnel will evaluate all related QA Restart Work Item Acceptance Criteria, through surveillances, to ensure that acceptance criteria have been satisfied and deliverables are complete.



CONTROL OF RQPT CLOSURE PACKAGES  
CATEGORY 3

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4.0 PROCEDURE

4.1 Closure Package Identification.

4.1.1 A closure package will be developed for each QA restart acceptance criteria (ie. QA-1.1, QA-1.2 ) by the RRQA Restart Item Lead to provide objective evidence that restart work items have been completed. The following actions are to be completed prior to package closure:

4.1.1.1 Restart deliverables are identified by RRQA personnel, ensuring all supporting documentation is complete and accessible.

4.1.1.2 RRQA personnel will include in the package all documents required to support closure of restart items. All closure packages are forwarded to the RRQA Closure Coordinator.

4.2 Makeup of Closure Package Documentation

4.2.1 The RRQA Restart Item Lead will organize the closure package using the following format.

4.2.1.1 The closure package will contain a file index sheet indicating the ROMP Restart Work Item of the closure package. This page will clearly state the item covered and any unique identity. The cover sheet will also include a statement, for "QA" designated ROMP Restart Work Items, indicating the elements NQA-1, 1986 that were cover by the Restart Work Item. This statement will be based on the NQA-1 comparison matrix.

4.2.1.2 A package index will be included to identify the documents contained in the closure package by unique identification and revision if applicable.

4.2.1.3 In accordance with the package index, each section shall include the final approved documents and closure approvals as required.

4.2.2 The following is a list of required documents to be included in the closure package:

- o Cover File Index
- o Package Index
- o ROMP Restart Work Item
- o Deliverables
- o RRV Final Issue Surveillance
- o Resolution of Comments Document

CONTROL OF RQPT CLOSURE PACKAGES  
CATEGORY 3

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4.3 Closure Package Review and Approval

- 4.3.1 The RRQA Closure Coordinator shall review the entire closure package for completeness and submit to the Restart QA Manager for final review and concurrence of the closure action.
- 4.3.2 The Restart QA Manager will review and sign the Cover File Index to close action on the closure package. The package will be returned to the RRQA Closure Coordinator for any additions or corrections. If the closure package is complete, DOE will be notified of package completion for their review/concurrence. After this review the package will be given to the RRQA Record Clerk for inclusion into the RRQA Document Control system, in accordance with RQPT-I-001, as a record.
- 4.3.3 The closure package shall be reviewed for items identified that are beyond the scope of the Restart Work Item but require correction or additional consideration. Any additional items requiring correction or additional consideration shall be identified in an Inter-Office Memorandum to the Quality Assurance Manager, Reactor Safety Improvement Program.

5.0 RECORDS

5.1 RRQA CLOSURE PACKAGE

6.0 TERMS AND DEFINITIONS

None

7.0 REFERENCES

7.1 RQPT-I-001, DOCUMENT CONTROL

7.2 RQPT-I-002, CONTROL OF RQPT RECORDS

7.3 DPSOL 399-4, REACTOR RESTART CLOSURE PROCESS

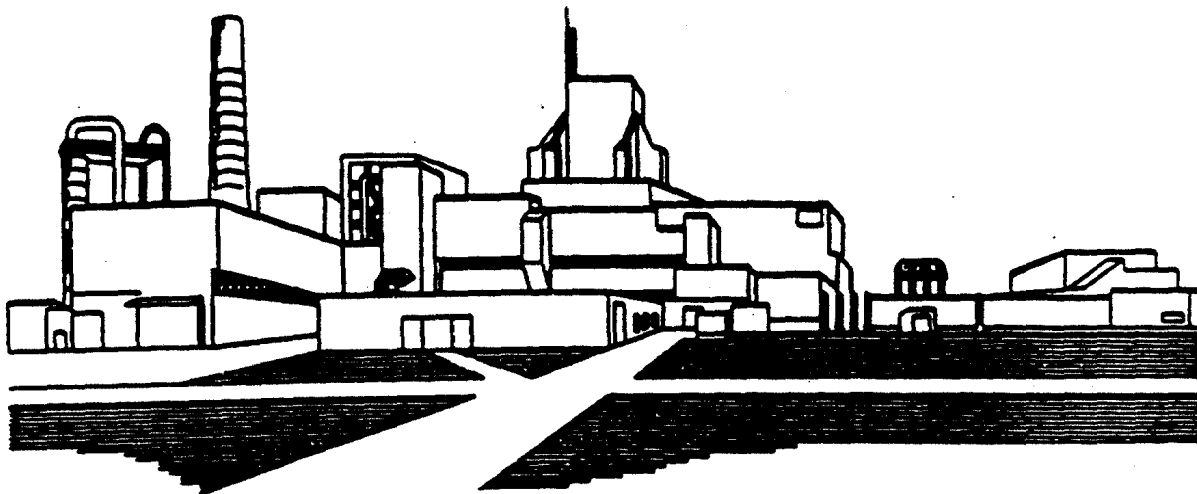
7.4 WSRO-RP-89-368, REACTOR OPERATIONS MANAGEMENT PLAN (ROMP)

8.0 ATTACHMENTS

NONE



**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**



**APPROVALS:**

**MANAGER - READINESS REVIEW BOARD STAFF**

R.G. Burns

DATE: 11/9/90

**DEPUTY GENERAL MANAGER - REACTOR OPERATIONS**

C. J. Pachipang

DATE: 11/15/90

DOE-SR \_\_\_\_\_

DATE: \_\_\_\_\_

RECEIVED  
Aug 7 9 54 AM '91  
DNF SAFETY DIVISION

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****TABLE OF CONTENTS**

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**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

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- EXHIBIT 1 - REACTOR ORR ORGANIZATION
- EXHIBIT 2 - ORR ACTIVITY FLOWCHART
- EXHIBIT 3 - FORM A1: ACCEPTANCE CRITERIA
- EXHIBIT 4 - FORM B1: OPEN ITEM
- EXHIBIT 5 - FORM B2: CERTIFICATE OF READINESS

**ADDENDUM 1: K REACTOR ORR CHARTER LETTER**

**ADDENDUM 2: REACTOR RESTART ORR CHECKLIST**

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**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****REVISION SUMMARY SHEET**

This table will summarize the changes made for each revision. The paragraph containing the revision will be marked by an \* in the far right hand margin at the end of that paragraph.

**REVISION 1 CHANGES:**

<b>SECTION</b>	<b>CHANGE and REASON</b>
Table of Contents	Added the Revision Summary Sheet, the Reporting Section, and Addendum 1 to Table of Contents. Renumbered the Closure Section and Addendum 2.
Revision Summary Sheet	Created revision summary sheet to provide a summary of revisions
I.	Identified both the current and draft DOE SR ORR Order. Identified the Manager for which the ORR is to be conducted. Specified K Reactor since the plan is specific for K Reactor.
I.	Added the statement about deviations from SROM 548X.1. Also showed the current and draft manuals.
II.	Added that the Westinghouse Independent Safety Review items will not be included in the ORR as reflected in the Reactor Operations Management Plan.
V.A.	Revised the organization names to reflect the organizational changes.
V.C.	Revised the organization names to reflect the organizational changes. Added as a basic element source the Non Conformance Reports and the Reactor Restart Quality Assurance Program.
VI.G.	Added the Reporting Section.
VI.H.	Renumbered the Closure Section. Added the President - WSRC.
VI.H	Added that the ORR records will be archived.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

- VII. Added that the overall schedule is shown in the Reactor Operations Management Plan.
- IX.1 & 2 Revised to show both the current and draft information.
- IX.5 & 7 Revised to show latest edition of document.
- EXHIBIT 1 Revised the titles to reflect organizational changes and added the ORR Team.
- EXHIBIT 3 Added NUMBER(S) to the "DESCRIPTION OF BASIC ELEMENT(S)" section to improve the clarify of the form and deleted NUMBER from the ACCEPTANCE CRITERIA AND NUMBERS section to improve the clarity.
- ADDENDUM 1 Incorporated the K ORR Charter Letter.
- ADDENDUM 2 Incorporated the approved K ORR Checklist.
- END OF REVISION 1

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**REVISION 2 CHANGES**

- Throughout The typographical corrections made will not be identified.
- Throughout Revised Plan for use for K, L, & P reactor restarts.
- Coversheet Added DOE-SR approval.
- II. Added additional paragraphs to clarify the Scope of the ORR for each reactor.
- Clarified the closure process for Charlotte items.
- IV. Revised to reflect addition to Readiness Review Board. Clarified that the same RRB will be utilized for K, L, & P Reactor ORRs.
- V.A. Revised to reflect correct number of members of Readiness Review Board.
- V. C Revised to reflect additional items added to the ORR scope.
- V. F. Revised to reflect current organization.



**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

- VI. A Added statement clarifying ORR Plan & Procedure review and approval by the RRB. Also included the DOE-SR approval.
- VI. B Clarified training requirements.
- VI. D Described the use of generic acceptance criteria for hardware systems.
- VI. E Clarified that the Certificates of Readiness will be prepared at the checklist item level.
- VIII. Revised to clarify requirement.
- IX. Added the Reactor Operations Management Plan.
- ADDENDUM 2 Revised to reflect current organization and program structure.
- END OF REVISION 2

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**REVISION 3 CHANGES**

- III. Clarified definition of Open Item  
Punchlist renamed Punchlist Item for clarity
- IV. Provided specific qualification requirements for the ORR Team members as requested by DOE-SR.
- VI. B Provided specific training requirements for the ORR team members as requested by DOE-SR.
- VI. D. Added the use of generic criteria for closure of items defined in ROMP Volumes 2, 3, and 4.
- VI. H. Revised to reflect completion verification of the A punchlist items by the ORR team as requested by the RRB.
- VII. Verified notifications to DOE-SR on ORR progress as requested by DOE-SR.
- IX. Revised to reflect updated ROMP.
- EXHIBIT 3 & 4 Revised format to make more readable based on experience.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

- EXHIBIT 5 Revised to better summarize readiness and to improve readability based on experience.
- ADDENDUM 2 Corrected name of checklist item 1.B.06.03.  
Revised titles of checklist 3.B.04 & I 3.B.05 to reflect changes. Deleted 3.F.05 included in other items.

**END OF REVISION 3**

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**REVISION 4 CHANGES**

- IV Increased RRB to 9 total members with the addition of the respective plant manager to increase involvement. Increased the quorum to a total of 5.
- IV, V A, VI H, Exhibit 1 Revised title from Deputy General Manager-Reactors to Deputy General Manager-Reactor Operations to reflect organizational change.
- V Deleted sentence on whom the RRB Chairman appoints since it is already covered in IV and Exhibit 1.
- Exhibit 1 Added Plant Manager - K, L, or P Reactor

**END OF REVISION 4**

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**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****I. PURPOSE OF THE OPERATIONAL READINESS REVIEW (ORR)**

The purpose of this Operational Readiness Review (ORR) is to provide management an independently developed assessment of the operational readiness for each reactor system as required by DOE Order SR 548X.1 and 548X.1A (draft). This ORR is being conducted on behalf of the Vice President and General Manager - Reactor Restart Division and the K Reactor ORR Charter Letter is included as Addendum I. This ORR is a Reactor Restart requirement.

This ORR will provide a formal and auditable review of hardware, personnel items, and administrative controls necessary for safe operation of the reactor.

This ORR Plan contains no significant deviations from the DOE ORR manual SROM 548X.1 Rev. 1 and Rev. 2 (draft) . One deviation is that our checklist has three major topics instead of the five in SROM 548X.1 Rev. 2. The Documentation and Program sections have been incorporated into the other three.

**II. SCOPE OF THE ORR**

Each reactor ORR will be performed and documented to provide added assurance that additions or changes to the facilities, processes, or administrative controls:

1. are implemented as designed,
2. can be operated safely and securely,
3. will perform as designed,
4. will be operated or used by trained and qualified personnel, and
5. have received adequate consideration so that operation will not create undue risk to the employees, the public, or the environment.

The review will focus on the areas having significant change and concern. Each checklist item will be evaluated and reviewed to a depth adequate to provide management an accurate assessment of reactor operational readiness. The acceptance criteria will define the depth of review for that checklist item.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

The Reactor Operations Management Plan (ROMP) defines the WSRC restart commitments and will provide the basis for the items to be reviewed in determining the reactor restart readiness. The ROMP contains pertinent restart commitments as evaluated by the Issue Management group from the Charlotte criteria, the Westinghouse Independent Safety Review recommendations, various DOE requests, the DOE Safety Evaluation Report, and from previous studies.

We will complete an ORR for K reactor restart prior to fuel loading and prior to power operation. For L reactor, we will complete an ORR prior to the assembly movements for the ultrasonic testing and prior to power operation. Since P reactor contains fuel assemblies and has been ultrasonically tested, we will only do an ORR prior to power operation.

The Charlotte Restart Criteria activities, the Westinghouse Independent Safety Review activities, and the Restart Quality Assurance Program activities will not be closed by the ORR for K Reactor but will be closed by a separate process. The ORR reports for K Reactor will however include the closure status for these three separate areas. The ORR for L and P Reactors will provide closure for these three areas and will use the criteria developed for K Reactor closure.

An independent evaluation of the ORR process will be performed by the Quality Assurance Department and by the Reactor Safety Evaluation Section (RSES) Operational Readiness Evaluation (ORE) Team of ESH&QA Division to provide additional assurance of readiness.

**III. DEFINITIONS****Approval**

A signed statement that the work, decisions or actions described in the document being approved have actually been achieved and that the signers judge it to be acceptable.

**Acceptance Criteria (AC)**

Established, documented and measurable conditions needed to ensure a checklist item has been satisfactorily completed.

**Basic Element (BE)**

An entry in the matrix of work to be done before restart.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****Certification**

A signed statement that a checklist item is complete because objective evidence is available documenting that the item meets the approved acceptance criteria.

**Checklist**

A formal listing of all hardware systems, personnel, and administrative controls which are assessed to ensure operational readiness.

**Checklist Item**

An item from the checklist.

**Checklist Item Reviewer (CIR)**

The individual assigned responsibility for a checklist item.

**Disposition**

The action needed to comply with the acceptance criteria or to close an open item.

**Independent Review**

A review by knowledgeable personnel not in the line organization.

**Matrix**

A cross reference between the checklist items and the basic elements which is maintained by the Readiness Review Board Staff and is utilized to aid in the coordination of resolutions.

**Open Item**

Any aspect of a checklist item found during the course of the review that does not meet all or part of the approved acceptance criteria and the resolution is normally outside the planned scope of work. Open items must be resolved before the checklist item certification of readiness form can be completed.

**Oversight**

An independent function designed to provide additional assurance of readiness.

**Phased Reactor Restart**

The sequential phases in the restart of a reactor which include:

1. fuel loading
2. operation at approved power level

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****Punchlist Item**

An incomplete portion of a checklist item that is sufficiently specific and of a routine nature so that it can be completed by existing programs or procedures. An A punchlist item must be completed before restart while a B item can be completed after restart.

**Reactor Readiness Package (RRP)**

A package of documentation which supports certification of readiness for a checklist item.

**Reactor Operational Readiness Review Plan (ORR Plan)**

The document that defines the philosophy and methodology for the reactor readiness review.

**Reactor Safety Evaluation Section (RSES)**

A group outside the reactor line organization charged with oversight of reactor safety. This group is part of the ESH&QA Division.

**Readiness Review Board (RRB)**

Personnel defined in the ORR Plan that will certify the reactor is ready for restart and that oversee the activities required to certify the reactor is ready for restart.

**Readiness Review Board Staff (RRB Staff)**

Personnel assigned to perform the operational readiness review and to assist the readiness review board.

**Revisions**

Revisions are changes to previously approved documents. These changes must have the same approval as did the original and must be justified.

**Startup Item (SI)**

Any item that is required for that part of the phased reactor startup.

**Tree**

A structured outline to assure all aspects of the operation are addressed. The ORR tree has three major branches: hardware, personnel, and administrative controls.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****IV. REACTOR ORR ORGANIZATION**

The line management is responsible for preparing the reactors for safe operation. The Reactor ORR organization is designed to interact with the line management in order to provide a formal system of internal readiness review. The Reactor ORR organization (Exhibit 1) consists of a Readiness Review Board (RRB), a support staff for the Board, and checklist item reviewers.

The RRB is composed of a Chairman, a Vice Chairman, a Staff Manager and six (6) other members with alternates. The Deputy General Manager - Reactor Operations is the Chairman. A quorum is defined as the Chairman or Vice-Chairman plus four primary or alternates present. The Staff manager is a non-voting member. The same RRB will be utilized for K, L, and P Reactor ORRs. \*

The RRB will also have several non-voting observers from other organizations such as RSES and QA from ESH&QA Division along with DOE-SR. Each organization may assign a primary and alternate observer.

The RRB support staff will consist of a manager and the necessary technical and secretarial personnel. The ORR Team is located in the 703-C trailers. If additional personnel are required during the review step, we will utilize the cognizant engineers from Reactor Engineering.

The ORR team will have technical degrees and 5 years nuclear experience or 10 years nuclear experience with no degree.

**V. RESPONSIBILITIES****A. DEPUTY GENERAL MANAGER - REACTOR OPERATIONS**

The Deputy General Manager - Reactor Operations will be the RRB Chairman. At the completion of the ORR, the Deputy General Manager - Reactor Operations will provide the Vice President and General Manager - Reactor Restart Division with a letter certifying reactor readiness for that phase. \*

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****B. READINESS REVIEW BOARD**

The RRB will review and approve the Reactor ORR Plan and Procedure and approve any revisions or addenda. The RRB will also contribute to the development of the ORR checklist and approve the final issue. The RRB will approve and issue the restart acceptance criteria. The RRB will approve the Reactor Readiness Packages and any Open Item disposition. All comments and concerns will be addressed to the satisfaction of the RRB.

After the readiness acceptance criteria for all checklist items have been satisfied, the RRB will review and approve the A and B Punchlists for completion by line organizations.

**C. RRB STAFF**

The RRB Staff and its manager will draft and revise the Reactor ORR Plan, Procedure, and Checklist. Once the Plan and Procedure are approved, they shall be forwarded to DOE-SR with a notification letter indicating that the Reactor ORR has begun. During the ORR, the RRB Staff may require additional temporary personnel to assist the staff in conducting the ORR. The RRB staff shall provide training and additional written guidance to aid the personnel in understanding their role and responsibilities in conducting the ORR. The staff will be responsible for RRB correspondence.

A listing of the basic elements shall be developed and maintained by the staff. The ROMP will be the source for restart commitments. More detailed information on the commitments will come from the following sources:

1. Charlotte Restart Criteria report
2. Westinghouse Independent Safety Review report
3. Reactor Restart Quality Assurance Program report
4. Outage Management Work Scheduling system
5. Reactor Issue Management Program restart decisions
6. DOE Safety Evaluation Report
7. Various DOE requests.



**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

To aid in the development of acceptance criteria, these basic elements will be appropriately assigned to checklist items and provided to the item reviewers. The staff shall administer the plan to ensure uniformity, accuracy and completeness of documentation. Open items will be tracked by the staff and reviewed with the RRB. Monitoring the progress of overall activities, status reports and document retention shall also be performed by the RRB staff. Punchlist items shall be tracked by the staff.

The RRB Staff will provide assistance to the ORE and DOE-SR team members during the ORR. The RRB Staff will transmit to the ORE and DOE-SR team copies of the ORR Plan, Procedure, checklist, open items, open item disposition, readiness packages, and punchlists. The RRB Staff will also transmit to the ORE and DOE-SR team copies of the acceptance criteria and readiness packages as requested.

**D. CHECKLIST ITEM REVIEWERS**

The checklist item reviewers will be part of the RRB staff. The reviewers will propose acceptance criteria for the items to ensure readiness. Reviewers shall be responsible for notifying appropriate personnel of the need to review documentation. Also, reviewers should obtain the appropriate approval from responsible individuals for system walkdowns and personnel interviews. Critiquing of the checklist item shall be performed by the reviewer and open items shall be issued as required. Reviewers shall provide the "Certification of Readiness" and Reactor Readiness Package to the RRB.

**E. OBSERVERS**

The observers on the RRB are not directly responsible for any of the line organization activities. The observers shall provide input to the RRB regarding the concerns and activities of their organizations.

**F. MANAGER - Strategic Programs**

The Manager Strategic Program will review the Reactor Safety Improvement Program (RSIP) initiatives for any restart impact and inform the RRB of any concerns. The Manager Strategic Programs will, when requested, incorporate a disposition (or portions of a disposition) into RSIP. The Manager Strategic Programs shall provide the RRB with documentation of the inclusion of such items prior to the RRB affirming reactor restart readiness.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****G. INDEPENDENT OVERSIGHT AGENCY (ESH&QA)**

The ESH&QA Division will provide oversight of the ORR process through their Quality Assurance (QA) and Reactor Safety Evaluation (RSES) sections. These evaluations will not replace the line organization's responsibility in review and/or disposition of items. Both groups shall inform, in a timely manner, the RRB or RRB Staff of any concerns arising from their evaluation. Both groups will also report their results through their line organization to the Vice President and General Manager ESH&QA Division. The RSES will utilize an Operational Readiness Evaluation (ORE) Team for its oversight.

**VI. ORR PROCESS**

The ORR will be conducted using the following steps and is shown in Exhibit 2:

- A. preparation, review and approval of the ORR Plan and Procedure,
- B. ORR staffing and training,
- C. preparation, review and approval of the ORR Checklist,
- D. preparation, review and approval of the acceptance criteria for each checklist item,
- E. review and documentation that each checklist item meets its acceptance criteria,
- F. disposition, review and approval of each checklist item not meeting its acceptance criteria,
- G. closure.

**A. ORR Plan and Procedure**

The ORR Plan and Procedure will be developed by the RRB Staff for review and approval by the RRB Staff Manager and the RRB. The RRB Chairman will then sign the ORR Plan and Procedure. The ORR Plan and Procedure will then be transmitted to DOE-SR Restart Manager for approval.

The ORR Plan defines the scope, organization, responsibilities, processes, and philosophies to be used during the ORR. The ORR Procedure provides more detailed direction for implementing the ORR Plan. Detailed instructions include:

\* documenting the review of all additions or changes to process related equipment and electrical systems, control documents, procedures, and records.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

\* reviews to include evaluation for nuclear safety impact, and assessment of restart readiness for personnel items, hardware, and administrative controls.

\* documentation of the disposition of incomplete checklist items into three lists:

- + Open items - items which must be resolved before restart and are outside the planned scope of work
- + A Punchlist - items required before startup and will be completed using existing systems
- + B Punchlist - items that can be completed following restart and will be completed using existing systems

**B. Staffing and Training**

The ORR staffing will be the responsibility of the Deputy General Manager - Reactors. The RRB Staff Manager will be responsible for the training development and execution. The training will center around ORRs, the Management Oversight and Risk Tree (Reference 4), and investigative team type efforts.

Each member of the ORR team will receive training on the contractor ORR Plan and Procedure, the DOE-SR Order and Manual on ORRs, Reactor Operations Management Plan, and the DOE Safety Evaluation Report. In addition, at least one member of the team will have formal training in MORT.

**C. Checklist Preparation**

The RRB Staff will develop the checklist for the Reactor ORR using the generic Management Oversight and Risk Tree. The generic tree will be modified to be specific for the Savannah River reactor systems. Existing hardware, administrative control, and personnel items associated with reactor operation will be listed and related to the appropriate section of the tree to create the checklist. This listing shall be developed in concert with various experts within the line organization. The checklist will be reviewed by the RRB staff and, if deemed appropriate, additional items added to the list. The RRB Staff shall document the development process and the RRB shall approve the final checklist. The approved checklist will be issued as an Addendum to the ORR Plan.

**D. Acceptance Criteria**

Specific acceptance criteria will be prepared by a checklist item reviewer for each checklist item using Form A1 (Exhibit 3). The RRB

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

Staff will peer review each acceptance criteria to ensure consistency. The RRB will then review and approve each acceptance criteria.

The acceptance criteria will focus on areas of significant change and concern to maximize the review impact. This will help to identify any programmatic problems. The acceptance criteria will include a measurable performance indicator along with the method of measurement. Where applicable, the acceptance criteria should utilize recognized standards of performance.

In order to maximize the effectiveness of the ORR effort, we will utilize generic acceptance criteria for many of the hardware checklist items. The list of basic elements to be assessed will be specific for each hardware system but the same generic acceptance criteria will be used. For example, we will assess the corrective and preventive maintenance activities, the project modifications, the Nonconformance Report status, and the periodic DPSOL status for every hardware system. The list of basic elements will be updated during the duration of the ORR to ensure timeliness.

Generic acceptance criteria have been developed and will be used for closure of most of the restart work items defined in ROMP Volumes 2, 3, and 4 (for K, L, & P reactors respectively). The detailed acceptance criteria for the deliverable is specified for each part of the restart work item under the "Deliverable Acceptance Criteria" section. The major classifications in ROMP Volumes 2, 3, and 4 are the Charlotte Criteria, the WISR items, the Outage Work items, the Quality Assurance items, the DOE Added Work Scope items, the RIMP Work Scope items, and the SER Added Work Scope items.

**E. Determining if the Acceptance Criteria is Met**

The line organization will complete those activities needed to meet the acceptance criteria. The checklist item reviewer will then perform the review of the existing system and/or the disposition activities. Documented evidence of any disposition activities shall be provided. During this period the reviewer is responsible for critiquing the existing system activity and identifying any open items. Open items shall be recorded on Form B1 (Exhibit 4), peer reviewed by the RRB staff and entered in the database for tracking.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN**

The "Certificate of Readiness" (Form B2, Exhibit 5) will be completed at the checklist level when the acceptance criteria have been met. The form lists supporting documentation, which will be attached, any open items associated with this checklist item and any punchlist items. Form B2 is signed by the reviewer certifying that the checklist item(s) is, with the exceptions noted, operationally ready. Forms A1, as well as Form B2 and its attachments, make up the reactor readiness package.

The RRB staff shall collect and peer review each reactor readiness package. The RRB shall approve each package and when requested the reviewer shall provide a presentation of the reactor readiness package.

**F. Disposition of Items Not Meeting the Acceptance Criteria**

If the acceptance criteria for a checklist item is not met, then that checklist item is classified as an open item, an A, or a B punchlist item.

Open item disposition will be recommended by the reviewer and, if necessary, the RRB staff. The proposed disposition will be reviewed by the RRB Staff and approved by the RRB. The RRB staff will track each open item. Additional resources may be allocated by the RRB for open item disposition.

The RRB staff will compile the A and B punchlists for review and approval by the RRB.

**G. Reporting**

The status reporting will be part of the Readiness Review Board meetings. Periodic written status reports will also be issued.

The ORR reports will have the following basic sections: a summary, an introduction, a description of the review process, results, approvals and any appendices needed. We will issue a report for Phase I, Phase II, and the follow-up phase.

We will also issue a Management Summary version of each report.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****H. Closure**

Upon approval of all readiness review packages along with the A and B punchlists, the RRB Staff Manager shall inform the RRB that the reactor line organization has complied with all reactor ORR restart requirements, with the exception of completing the A punchlist items and will submit the ORR report.

The RRB Staff will followup on the completion of the A punchlist items and will report to the RRB when all the A punchlist items are resolved.

Line management will inform the Deputy General Manager - Reactor Operations that all A punchlist items have been completed. \*

The Deputy General Manager - Reactor Operations shall inform the Vice President and General Manager - Reactor Restart Division that the reactor is ready for restart including completion of all A punchlist items. The Vice President and General Manager - Reactor Restart shall then inform the President - WSRC that a reactor (K, L, or P) is ready for restart. \*

The documents generated by the ORR Team that are needed to support the assessment will be retained and archived.

**VII. SCHEDULE**

The schedule for each reactor ORR is interrelated to and part of the overall Reactor Restart Schedule. The ROMP provides detailed schedule information for each reactor ORR.

DOE-SR will receive formal notification when the K Reactor Fuel Load ORR is completed and when the K, L, & P Reactor Power Operation ORRs are completed. DOE-SR will receive verbal notification through the RRB meetings on the approval of acceptance criteria and readiness packages as well as significant issues and periodic progress reports.

**VIII. QUALITY**

The activities of the ORR will be in compliance with the Reactor Division QA Plan.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN****IX. REFERENCES**

- 1A. ORDER SR 548X.1, OPERATIONAL READINESS REVIEWS, DOE SAVANNAH RIVER OPERATIONS OFFICE, 8/10/87.
- 1B. ORDER SR 548X.1A, OPERATIONAL READINESS REVIEWS, DOE SAVANNAH RIVER OPERATIONS OFFICE, 6/30/89 DRAFT.
- 2A. MANUAL SROM-548X.1, PREPARATION AND PERFORMANCE OF OPERATIONAL READINESS REVIEWS, DOE SAVANNAH RIVER OPERATIONS OFFICE, REVISION 1, 12/18/86
- 2B. MANUAL SROM-548X.1, PREPARATION AND PERFORMANCE OF OPERATIONAL READINESS REVIEWS, DOE SAVANNAH RIVER OPERATIONS OFFICE, REVISION 2, 6/30/89 DRAFT
3. WHC-CM-1-3, MRP 5.50 REV.0, OPERATIONAL READINESS REVIEWS, WESTINGHOUSE HANFORD COMPANY, 9/30/88.
4. WHITSETT, JOHN, OPERATIONAL READINESS REVIEW HANDBOOK, DRAFT FOR REVIEW, 8/29/88.
5. WSRC-T1, NUCLEAR SAFETY CONTROL PROCEDURES, WSRC, REV. 0, 9/5/89 DRAFT.
6. DPW-83-111-3, SAVANNAH RIVER PLANT QUALITY ASSURANCE MANUAL, REVISION 10, JUNE 1988.
7. WSRC-SAR-RX-K, SAVANNAH RIVER SITE PRODUCTION REACTOR SAFETY ANALYSIS REPORT, WSRC, 7/17/89.
8. LUKOSIUS, E. J. OPERATIONAL READINESS REVIEWS - CONTRACTOR MANUAL, 10/12/88 DRAFT.
9. DOE, SAVANNAH RIVER PLANT K-REACTOR RESTART STRATEGY, NOVEMBER, 1988.
10. WSRC.1.01 MP 4.14, OPERATIONAL READINESS REVIEWS, WSRC, Rev. 0, APRIL 1, 1989.
11. WSRC-RP-89-368, REACTOR OPERATIONS MANAGEMENT PLAN, WSRC, Rev 3, April 10, 1990.

REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN

EXHIBIT 1

REACTOR ORR ORGANIZATION

President  
WSRC

Vice President & General  
Manager - Reactor Restart Division

Deputy General Manager  
- Reactor Operations

Readiness Review Board

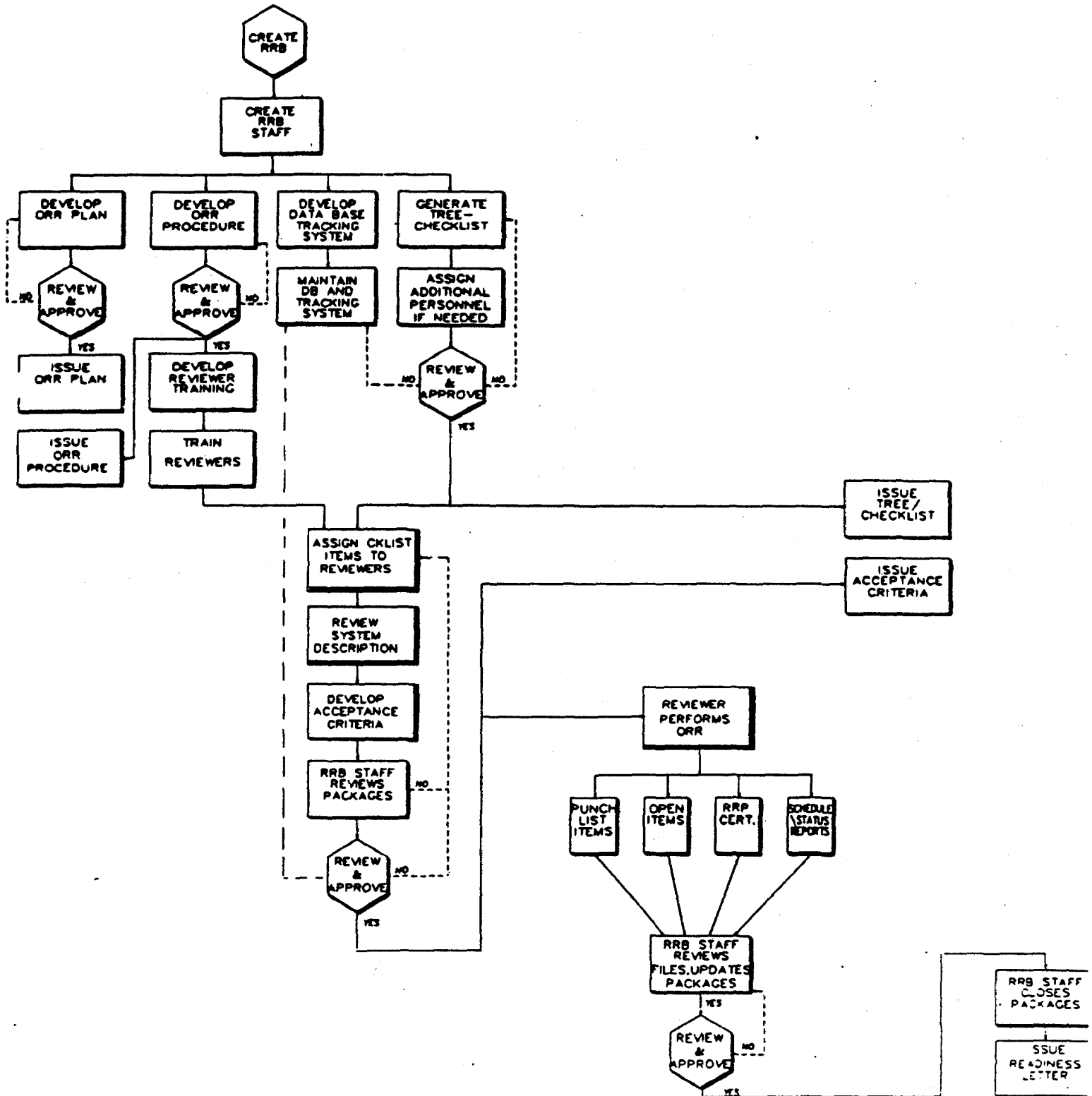
- \* Chairman: Deputy General Manager - Reactor Operations
- \* Vice Chairman: Manager - Reactor QA&A
- \* Members: Technical Director - Reactor Restart
  - Manager - Reactor Operations
  - Manager - Reactor Engineering
  - Manager - Nuclear Reactor Technology & Scientific Computations
  - Manager - Startup and Testing
  - Plant Manager- K, L, or P Reactor
  - Manager - Readiness Assessments Section
- \* Observers
  - Manager - Reactor Safety Evaluation Section
  - Manager - Site Quality Assurance Department
  - DOE - SRSPO
  - ORR Team Members



REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN

EXHIBIT 2

ORR ACTIVITY FLOWCHART



REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN

EXHIBIT 3

FORM A1: ACCEPTANCE CRITERIA

PAGE:

REVIEWER NAME:     DATE:

ITEM #:             TITLE:

FOR RESTART PHASE:

DESCRIPTION OF BASIC ELEMENT(S) AND NUMBER(S):

ACCEPTANCE CRITERIA:

ASSUMPTIONS:

RRB STAFF REVIEW: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN

EXHIBIT 4

FORM B1: OPEN ITEM

REVIEWER NAME:                      DATE:

OPEN ITEM #:                      TITLE:

ACCEPTANCE CRITERIA #:            TITLE:

EXPLANATION OF OPEN ITEM:

OPEN ITEM REQUIRES DISPOSITION PRIOR TO RESTART: PHASE 1-2  
(INDICATE ONE)

RECOMMENDATION:

RRB STAFF REVIEW:                      DATE:

DESCRIPTION OF DISPOSITION:

REFERENCES:

OPEN ITEM APPROVAL:

REVIEWER APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB STAFF APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

REACTOR RESTART OPERATIONAL READINESS REVIEW PLAN

EXHIBIT 5

FORM B2: CERTIFICATE OF READINESS

REVIEWER NAME: DATE:

ITEM TITLE:

ACCEPTANCE CRITERIA #: FOR RESTART PHASE: 1-2 (INDICATE ONE)

HAS ACCEPTANCE CRITERIA BEEN MET? (INDICATE ONE) YES / NO

SUMMARY OF ASSESSMENT ACTIVITIES SUPPORTING READINESS:

NUMBER OF OPEN ITEMS RESOLVED:

NUMBER OF A PUNCHLIST ITEMS TO BE COMPLETED:

NUMBER OF B PUNCHLIST ITEMS TO BE COMPLETED

CERTIFICATION OF OPERATIONAL READINESS:

REVIEWER: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB STAFF REVIEW: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

WESTINGHOUSE SAVANNAH RIVER COMPANY  
**INTER-OFFICE MEMORANDUM**

J. L. Gallagher  
 Vice President  
 Reactor Restart Div.

OPS-RRD-890067

November 30, 1989

TO:

**[REDACTED]**

FROM:

J. L. GALLAGHER, 703-A *JLG*

CHARTER LETTER - K REACTOR OPERATIONAL READINESS REVIEW

As part of the K Reactor restart effort, please conduct an Operational Readiness Review (ORR) for K Reactor. This ORR shall satisfy the requirements of DOE SR Order 548X.1, Operational Readiness Reviews (8/10/87), DOE SR Manual SROM 548X.1, Preparation and Performance of Operational Readiness Reviews (Rev. 1, 12/18/86), and WSRC 1.01 MP 4.14 Operational Readiness Reviews. Note that the DOE SR order and manual are currently undergoing revision.

The ORR shall provide management an accurate assessment of the K Reactor readiness to operate. The review shall be done independently of direct reactor line management so as to provide a thorough and documented unbiased readiness assessment of all appropriate hardware, personnel, and management control systems for K Reactor. To avoid duplication of effort, the ORR shall utilize, where applicable, the results of assessments done by other groups.

The ORR will provide closure for all K Reactor tasks except for those in the Charlotte Criteria and the Westinghouse Independent Safety Review which have a separate closure process.

The ORR shall be conducted such that it complements the K Reactor Restart schedule. All groups impacted by the ORR shall cooperate fully. Routine reporting shall be instituted to keep all involved parties, including our customer, current.

Please ensure that the necessary resources are expended to assure the ORR meets its required function.

JLG:ssm

ADDENDUM 2

REACTOR RESTART ORR CHECKLIST

1. HARDWARE

A. STRUCTURES

- 01. REACTOR BUILDING (105)
- 02. CW RESERVOIR (186 Basin)
- 03. CW PUMP HOUSE (190)
- 04. RECIRCULATION RESERVOIR (107)
- 05. BOOSTER PUMP BUILDING (191)
- 06. AUXILIARY PLANT STRUCTURES

B. SYSTEMS

- 01. REACTOR and AUXILIARY SYSTEMS
  - 01.01 PROCESS WATER
  - 01.02 PW PUMP DRIVE MOTORS
  - 01.03 REACTOR TANK PRESSURE RELIEF
  - 01.04 REACTOR TANK SHIELD COOLING SYSTEM
  - 01.05 BLANKET GAS SYSTEM
- 02. ENGINEERED SAFETY FUNCTIONS
  - 02.01 EMERGENCY COOLING SYSTEM
  - 02.02 CONTAMINATED WATER REMOVAL and STORAGE
  - 02.03 MODERATOR RECOVERY
  - 02.04 SUPPLEMENTARY SAFETY SYSTEM
  - 02.05 PROCESS ROOM SPRAY SYSTEM
  - 02.06 CONFINEMENT HEAT REMOVAL
  - 02.07 GANG TEMPERATURE MONITOR
  - 02.08 AUTOMATIC INCIDENT ACTION
- 03. WATER SYSTEMS
  - 03.01 COOLING WATER
  - 03.02 D-MACHINE COOLING WATER
  - 03.03 AUXILIARY WATER SYSTEMS
- 04. VENTILATION
  - 04.01 AIRBORNE ACTIVITY CONFINEMENT SYSTEM
  - 04.02 AUXILIARY BUILDING VENTILATION
  - 04.03 CONTROL ROOM

ADDENDUM 2

REACTOR RESTART ORR CHECKLIST

- 05. SERVICE SYSTEMS
  - 05.01 COMPRESSED GASES
  - 05.02 FIRE PROTECTION
  - 05.03 AUXILIARY SERVICE SYSTEMS
  
- 06. ELECTRICAL SYSTEMS
  - 06.01 HIGH VOLTAGE DISTRIBUTION
  - 06.02 EMERGENCY POWER
  - 06.03 SAFETY RELATED 120 VAC
  
- 07. CONTROL and INSTRUMENTATION SYSTEMS
  - 07.01 SCRAM INSTRUMENT SYSTEMS
  - 07.02 ACTUATOR SYSTEM
  - 07.03 RADIATION MONITORING
  - 07.04 AREA COMMUNICATIONS
  - 07.05 PROCESS MONITORING and CONTROL
  - 07.06 COMPUTERS
  - 07.07 MISCELLANEOUS MONITORING
  - 07.08 REMACS/REDAC
  
- 08. FUEL and TARGET HANDLING and STORAGE
  - 08.01 C&D MACHINES and AUXILIARY EQUIPMENT
  - 08.02 DISASSEMBLY
  - 08.03 ASSEMBLY
  
- 09. MISCELLANEOUS
  - 09.01 RESCUE and DECON EQUIPMENT
  - 09.02 RAD WASTE HANDLING
  - 09.03 HP WIND SYSTEM
  - 09.04 SPECIAL EQUIPMENT
  
- 10. CORE COMPONENTS
  - 10.01 MECHANICAL
  - 10.02 TECHNICAL

2. PERSONNEL

A. PERSONNEL SELECTION

- 01. EXEMPT
- 02. NON-EXEMPT/WAGE ROLL

ADDENDUM 2

REACTOR RESTART ORR CHECKLIST

B. STAFFING LEVELS

01. ROD
02. RED
03. RSAT
04. RTAP
05. SUPPORT

C. TRAINING

01. ROD
02. RED
03. RSAT
04. RTAP
05. SUPPORT

D. PROPER PRACTICE

01. PROCEDURE COMPLIANCE
02. STANDARD PRACTICE/INSTRUCTIONS
03. HP MANUAL COMPLIANCE

E. PERFORMANCE

01. AREA
02. INDIVIDUAL

3. ADMINISTRATIVE CONTROLS

A. OVERALL

01. ORGANIZATION, RESPONSIBILITIES, AND AUTHORITY

B. REACTORS

01. ORGANIZATION AND ADMINISTRATION
02. PROCEDURES
03. INFORMATION
04. ADMINISTRATIVE CONTROL
05. WORK CONTROL

C. ESH&QA

01. SAFETY
02. HEALTH PROTECTION
03. FIRE PROTECTION
04. EMERGENCY PREPAREDNESS
05. ENVIRONMENTAL
06. SECURITY & SAFEGUARDS



ADDENDUM 2

REACTOR RESTART ORR CHECKLIST

D. QUALITY ASSURANCE

E. TECHNICAL SUPPORT

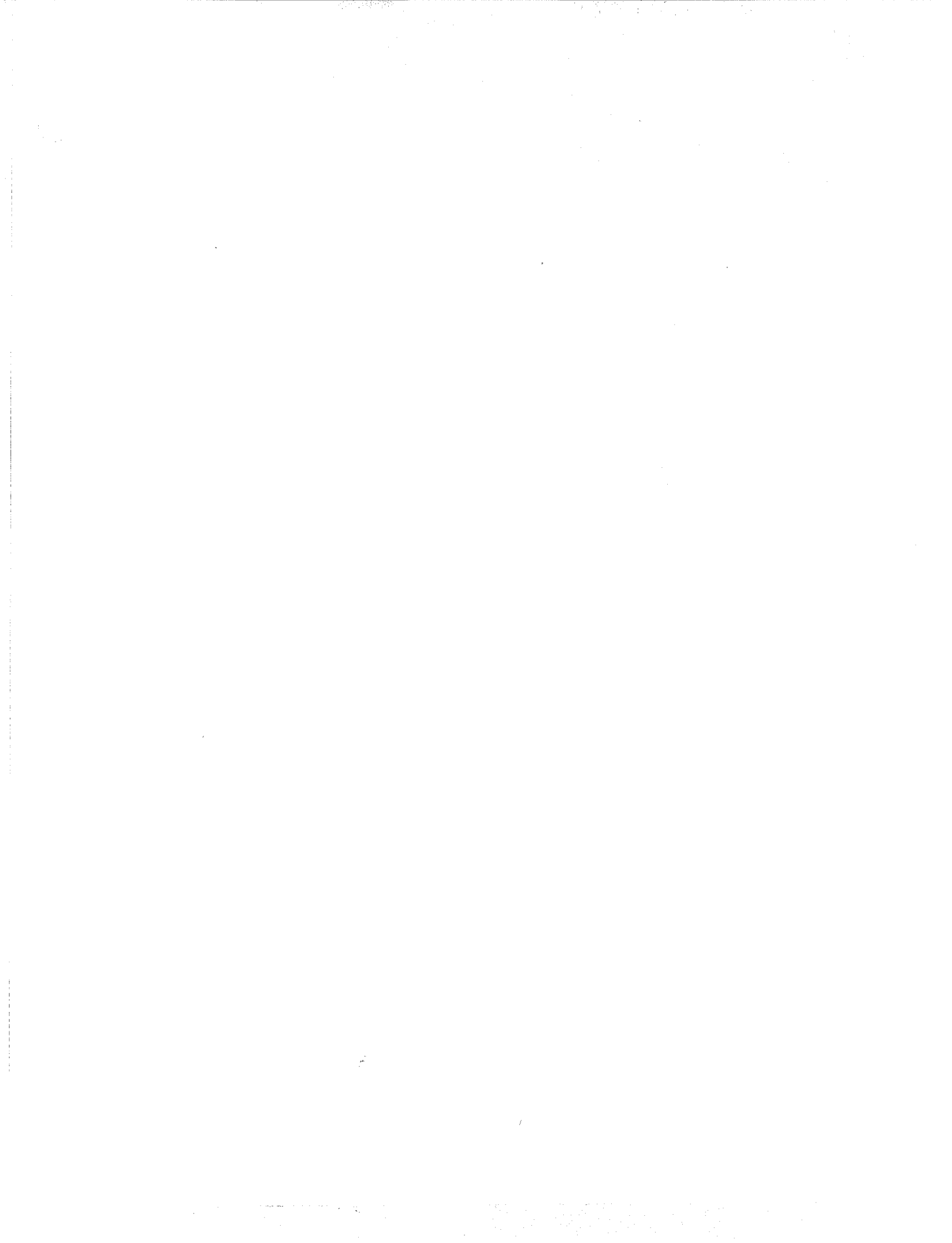
- 01. SRL
- 02. ENGINEERING & PROJECTS

F. REACTOR IMPROVEMENT PROGRAMS

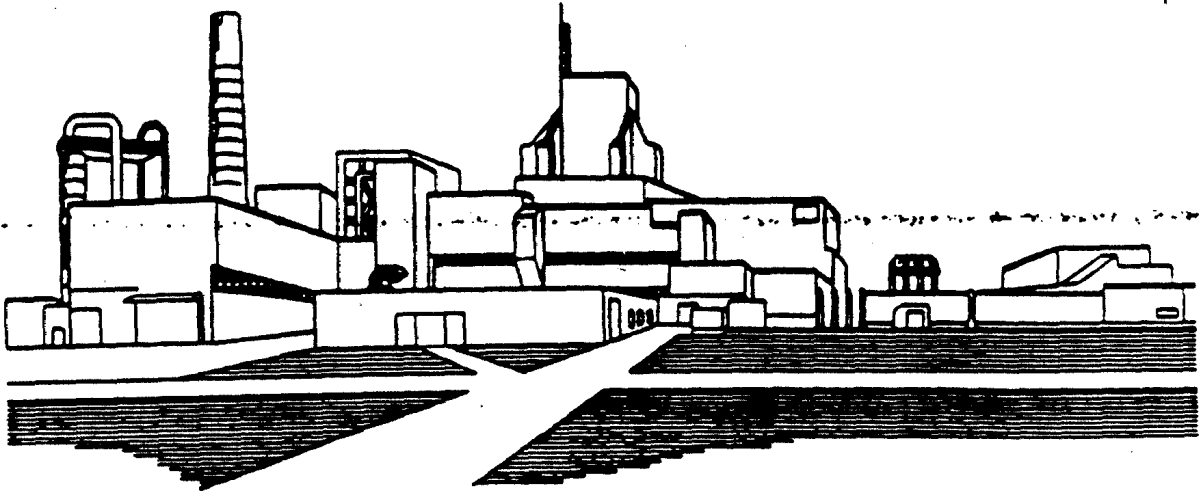
- 01. Reactor Issues Management
- 02. Modification Programs
  - 01. Seismic
  - 02. Baseline
  - 03. MOVATS
  - 04. Startup Test Program
  - 05. Reactor Power Limits
  - 06. Reactor Operating Envelope
  - 07. Configuration Management
- 03. Reactor Safety Improvement Program
- 04. SER Design Issues
  - 01. Control Rod Drive System Reliability
  - 02. Essential Core Monitoring
  - 03. Spurious Controls Operation
  - 04. Environmental Qualification
  - 05. Airborne Activity Confinement
  - 06. Safe Shutdown
  - 07. Sump Water Removal
  - 08. Systems Integrity
  - 09. Core Design
- 05. Culture Change

G. ROMP WORK SCOPE SECTIONS

- 01. Charlotte Criteria
- 02. Westinghouse Independent Safety Review
- 03. Outage Work
- 04. Restart Quality Assurance Program
- 05. DOE Added Work Scope
- 06. RIMP Work Scope
- 07. SER Added Work Scope



REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE



APPROVALS:

MANAGER - READINESS REVIEW BOARD STAFF

R B Burns

DATE:

11/9/90

DEPUTY GENERAL MANAGER - REACTOR OPERATIONS

C L Pabigan

DATE:

11/15/90

DOE-SR

DATE:

DNF SAFETY DIV  
AUG 7 9 54 AM '91  
RFP

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****TABLE OF CONTENTS**

APPROVAL SHEET

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3.14 Punchlist

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**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

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  - 6.2 Responsibilities
  - 6.3 Qualifications
  - 6.4 Training
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  - 8.1 Operational Readiness Evaluation Team
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  - 8.3 Observers
- 9.0 DEPTH OF REVIEW
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- 11.0 CHECKLIST
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- 12.0 ACCEPTANCE CRITERIA
  - 12.1 Scope
  - 12.2 Acceptance Criteria Form
- 13.0 REACTOR READINESS PACKAGE
  - 13.1 Scope
  - 13.2 Certification of Readiness Form
- 14.0 PUNCHLIST
- 15.0 OPEN ITEMS
  - 15.1 Scope
  - 15.2 Open Item Form
- 16.0 REVISIONS
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  - 16.2 Revision to Approved Document Form
- 17.0 REPORTING
- 18.0 CLOSURE
- 19.0 REFERENCES

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****EXHIBITS**

- EXHIBIT 1 - ORR ACTIVITY FLOWCHART
- EXHIBIT 2 - REVIEW AND APPROVAL SUMMARY
- EXHIBIT 3 - EXAMPLE REACTOR ORR CHECKLIST
- EXHIBIT 4 - FORM A1: ACCEPTANCE CRITERIA
- EXHIBIT 5 - FORM B2: CERTIFICATE OF READINESS
- EXHIBIT 6 - FORM B1: OPEN ITEM
- EXHIBIT 7 - FORM B3: REVISION TO APPROVED DOCUMENT

**ATTACHMENTS**

- ATTACHMENT 1 - SELECTED GENERIC ACCEPTANCE CRITERIA FOR HARDWARE CHECKLIST ITEMS
- ATTACHMENT 2 - SELECTED GENERIC ACCEPTANCE CRITERIA FOR ITEMS IN ROMP VOLUMES 2, 3, AND 4

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

REVISION SUMMARY SHEETS

This table will summarize the changes made for each revision. The paragraph containing the revision will be marked by an \* in the far right hand margin at the end of that paragraph.

REVISION 1 CHANGES:

<u>SECTION</u>	<u>CHANGE and REASON</u>
Title	Added Review to title
Page	
Table of Contents	Added the Revision Summary Sheet, the Reporting, and Closure sections to Table of Contents. Renumbered the References section.
Revision Summary Sheet	Created revision summary sheet to provide summary of revisions -
1.3	Identified both the current and draft DOE SR Order and Manual
1.5	Identified the Manager for which the ORR is being conducted.
4.47	Revised the title to reflect organizational changes.
9.2	Added that the Westinghouse Independent Safety Review items will not be closed by the ORR as reflected in the Reactor Operations Management Plan.
10.0	Revised this section to reflect the revised Issues Management screening questions.
EXHIBIT 3	Incorporated the approved K ORR Checklist.
EXHIBIT 4	Added NUMBER(S) to the "DESCRIPTION OF BASIC ELEMENT(S)" section and deleted NUMBER from the ACCEPTANCE CRITERIA AND NUMBER section to improve the clarify of the form.
EXHIBIT 4 INSTRUCTIONS	Revised the instructions to match the form and to the K ORR checklist.
EXHIBIT 5 INSTRUCTIONS	Revised instructions to match the checklist.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- EXHIBIT 6            Revised instructions to match the checklist..  
INSTRUCTIONS
- EXHIBIT 7            Revised instructions to match the checklist.  
INSTRUCTIONS
- 17.0                Added Reporting section
- 18.0                Added Closure section
- 19.0                Renumbered section. Revised format of references.
- 19.1                Added draft.
- 19.3A&B            Revised to show both the current and draft information.  
19.4A&B
- 19.6 & 7            Revised to show latest reference.
- 19.9                Added new Reactors Administrative Manual to reference  
list.

**END OF REVISION 1**

**REVISION 2 CHANGES**

- Throughout        The typographical corrections made will not be  
identified.
- Throughout        Revised Procedure for use for K, L, & P reactor restarts.
- Coversheet        Added DOE-SR approval.
- Table of            Added Exhibit 8 - Selected Generic Acceptance Criteria  
contents            for hardware checklist items.
- 4.1.3 & 5           Clarified phase 1 so that it also covers fuel assembly  
movements after assemblies charged to the reactor.
- 5.1.2               Revised to reflect addition to Readiness Review Board.
- 5.2.3,.4,  
.5,.6,.7,&.8        Clarified the RRB review and approval of the ORR Plan,  
ORR Procedures, acceptance criteria, open items, and  
A/B punchlists.
- 7.1                 Revised to clarify
- 9.1                 Revised to clarify



**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- EXHIBIT 3 Revised to reflect current organization and program structure
- 12.1 Expanded discussion of generic acceptance criteria.
- 13.1.4 Clarified content of reactor readiness package.
- 19.10 Added Reactor Operations Management Plan

**END OF REVISION 2**

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**REVISION 3 CHANGES**

- Throughout The typographical corrections made will not be identified.
- Table of contents Added Exhibit 9 - Selected Generic Acceptance Criteria for items in ROMP Volumes 2, 3, and 4.  
Added 6.3 - Qualifications per DOE-SR request.  
Added 6.4 - Training per DOE-SR request.  
Added 17.5 - Reporting to DOE per DOE-SR request
- 3.11 Clarified definition of open item.
- 3.14 Punchlist renamed Punchlist Items for clarity.
- 4.4.6 Revised to reflect verification of A punchlist item completion by ORR Team as requested by RRB.
- 4.4.8 Added step for ORR team to notify RRB and RRB notify VP&GM, ROD of resolution of all A punchlist items.
- 6.3 Added section on Qualifications per DOE-SR request.
- 6.4 Added section on Training per DOE-SR request.
- 11.1.2 Revised to clarify that ROMP provides the major source of work.
- EXHIBIT 3 Corrected name of checklist item 1.B.06.03.  
Revised name of 3.B.04 and 3.B.05.  
Deleted 3.F.05
- 12.1 Incorporated use of generic acceptance criteria.
- EXHIBIT 4 Revised for clarity based on experience.
- 13.1.4 Revised for clarity based on experience.
- EXHIBIT 5 Revised to better summarize readiness and improve readability based on experience.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- 14.3 Revised A punchlist to reflect completion verification by the ORR Team as requested by the RRB. Clarified to say restart phase.
- 14.8 Revised A punchlist to reflect completion verification by the ORR Team as requested by the RRB.
- 14.10 Revised A punchlist to reflect completion verification by the ORR Team as requested by the RRB.
- EXHIBIT 6 Revised for clarity based on experience.
- EXHIBIT 7 Revised for clarity based on experience.
- 17.5 Added to clarify reporting to DOE per DOE-SR request.
- 19.7 Revised to reflect revision to ORR Plan.
- EXHIBIT 8 Revised to reflect approved acceptance criteria for K Reactor Fuel Load ORR.
- EXHIBIT 9 Added generic non-hardware acceptance criteria forms and instructions.

END OF REVISION 3

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**REVISION 4 CHANGES**

- Table of Contents, 12.1 Changed EXHIBIT 8 & 9 to ATTACHMENT 1 & 2.
- 4.2.4 Corrected error in title.
- 4.4.1 Revised title from Deputy General Manager-Reactors to Deputy General Manager-Reactor Operations to reflect organizational change
- 5.1.1
- 5.1.2 Revised to refer to Reactor Restart Operational Readiness Review Plan, latest revision, for RBB composition.
- 5.1.4 Increased quorum to a total of 5.
- 19.7 Revised to reflect revision to ORR Plan.

END OF REVISION 4

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## REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

### 1.0 INTRODUCTION

- 1.1 This procedure details organizational responsibilities and provides instructions for performing Reactor Operational Readiness Reviews (ORR). Readiness reviews will provide additional documented assurance that the Savannah River reactors are ready for safe restart and operation.
- 1.2 The readiness review will be conducted to provide a structured, uniform and comprehensive approach to assess readiness against approved acceptance criteria and also to provide a record of all items considered during the review. The readiness review process will document line managements' certification and approval for reactor restart.
- 1.3 The Operational Readiness Review process has been developed utilizing the generic Management Oversight and Risk Tree (Whitsett), INPO Performance Objectives and Criteria for Operating and Near-term Operating License Plants (INPO 85-001), Operational Readiness Reviews (DOE Order SR 548X.1 & SR 548X.1A Draft), Preparation and Performance of Operational Readiness Reviews (DOE SROM-548X.1 Rev. 1 & Rev. 2 Draft), Operational Readiness Review Contractor Manual (Lukosius 10/88 Draft), Operational Readiness Reviews (WSRC.1.01 MP 4.14), and the Savannah River Site Production Reactor Safety Analysis Report (WSRC-SAR-RX-K, WSRC-RP-89-383, July 17, 1989).
- 1.4 Changes to this procedure can be made with approval of the Manager - Readiness Review Board Staff and the Deputy General Manager - Reactors.
- 1.5 This ORR is being conducted on behalf of the Vice President and General Manager - Reactor Restart and is a Reactor Restart requirement.

### 2.0 SCOPE

This procedure establishes operating guidelines for the ORR activities. It provides, in detail, the guidelines for performing a reactor operational readiness review as outlined in DOE Order 548X.1A. An ORR will be performed:

- 2.1 prior to startup after construction of a new facility or major system.
- 2.2 prior to startup after initiation of a major new process or operation.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- 2.3 prior to startup after significant modification to an existing facility, or to a major system, major process, or operating mode thereof.
- 2.4 prior to startup after a significant outage of the facility, major system, or major process.
- 2.5 prior to startup after shutdown for cause (significant disruption, accident, near miss, etc.) of a facility, major system, or major process.
- 2.6 on initiation of effort to inactivate, decommission, or dismantle a facility, system, or process unless directed otherwise by DOE-SR.
- 2.7 on imposition of an ORR requirement by DOE-SR or DOE-HQ.
- 2.8 if determined by the contractor or DOE-SR of the need for an ORR for reasons other than above.

**3.0 DEFINITIONS**

- 3.1 Approval  
A signed statement that the work, decisions or actions described in the document being approved have actually been achieved and that the signers judge it to be acceptable.
- 3.2 Acceptance Criteria (AC)  
Established, documented and measurable conditions needed to ensure a checklist item has been satisfactorily completed.
- 3.3 Basic Element (BE)  
An entry in the matrix of work to be done before restart.
- 3.4 Certification  
A signed statement that a checklist item is complete because objective evidence is available documenting that the item meets the approved acceptance criteria.
- 3.5 Checklist  
A formal listing of all hardware systems, personnel, and administrative controls which are assessed to ensure operational readiness.
- 3.6 Checklist Item  
An item from the checklist.
- 3.7 Checklist Item Reviewer (CIR)  
The individual assigned responsibility for a checklist item.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- 3.8 Disposition  
The action needed to comply with the acceptance criteria or to close an open item.
- 3.9 Independent Review  
A review by knowledgeable personnel not in the line organization.
- 3.10 Matrix  
A cross reference between the checklist items and the basic elements which is maintained by the Readiness Review Board Staff and is utilized to aid in the coordination of resolutions.
- 3.11 Open Item  
Any aspect of a checklist item found during the course of the review that does not meet all or part of the approved acceptance criteria and the resolution is normally outside the planned scope of work. Open items must be resolved before the checklist item certification of readiness form can be completed.
- 3.12 Oversight  
An independent function designed to provide additional assurance of readiness.
- 3.13 Phased Reactor Restart  
The sequential phases in the restart of a reactor which include:  
1. fuel loading  
2. operation at approved power level
- 3.14 Punchlist Item  
An incomplete portion of a checklist item that is sufficiently specific and of a routine nature so that it can be completed by routine programs or procedures. An A punchlist item must be completed before restart while a B punchlist item can be completed after restart.
- 3.15 Reactor Readiness Package (RRP)  
A package of documentation which supports certification of readiness for a checklist item.
- 3.16 Reactor Operational Readiness Review Plan (ORR Plan)  
The document that defines the philosophy and methodology for the reactor readiness review.
- 3.17 Reactor Safety Evaluation Section (RSES)  
A section outside the line organization charged with oversight of reactor safety. This group is part of the ESH&QA Division.

## REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

### 3.18 Readiness Review Board (RRB)

Personnel defined in the ORR Plan that will certify the reactor is ready for restart and that oversee the activities required to certify the reactor is ready for restart.

### 3.19 Readiness Review Board Staff (RRB Staff)

Personnel assigned to perform the operational readiness review and to assist the readiness review board.

### 3.20 Revisions

Revisions are changes to previously approved documents. These changes must have approval at the same level as did the original and must be justified.

### 3.21 Startup Item (SI)

Any item that is required for that part of the phased reactor startup.

### 3.22 Tree

A structured outline to assure all aspects of the operation are addressed. The ORR tree has three major branches: hardware, personnel, and administrative controls.

## 4.0 REVIEW PROCEDURE

### 4.1 General

4.1.1 A reactor operational readiness review provides an additional documented assessment that the reactor systems reviewed are ready for safe restart and operation. Furthermore, it assesses the personnel to verify that they are ready to safely restart and operate the reactor.

4.1.2 The reactor operational readiness review plan shall be consistent with the method and philosophy of the generic Management Oversight and Risk Tree (Whitsett) and shall consider the following major areas:

- I - Hardware
- II - Personnel
- III - Administrative Controls

4.1.3 Phased reactor restarts will consist of several phases and an ORR will be done for each phase.

The two (2) phases currently are:

1. Fuel loading or fuel assembly movements after being charged to the reactor.
2. Operation at approved power level

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

4.1.4 Operation at approved power level is defined as reactor operation at or below the approved power level. The exact power level has not been approved.

4.1.5 The following systems must be ready for operation before fuel loading or fuel assemblies being moved after being charged to the reactor:

- \* C & D machines
- \* Supplementary safety system
- \* Assembly
- \* Disassembly (if needed)
- \* Neutron flux monitoring system
- \* Process water system including instrumentation
- \* Contaminated water removal and storage
- \* Cooling water system
- \* Control and safety computers
- \* A & B auxiliary temperature recorders
- \* Confinement system
- \* Emergency power system
- \* Core design and components
- \* Alarm panels (as needed)
- \* Nuclear incident monitoring system

This list of required systems duplicates that defined in RTR-2119, Report of L-Area Fuel Charging Review Committee, (August 26, 1983) with the addition of the contaminated water removal system.

4.1.6 A database will be used to maintain status for each item for each reactor for each phase.

**4.2 Reactor Operational Readiness Review**

Before the reactor and its support systems can be declared ready for restart, an operational readiness review must be completed. The ORR for each phase shall be considered complete when:

4.2.1 All acceptance criteria for all checklist items required for that phase have been reviewed.

4.2.2 All open items for that phase of reactor restart have been resolved.

4.2.3 All the reactor readiness packages for that phase have been reviewed and accepted by the appropriate approval groups.

4.2.4 A letter certifying readiness has been sent to the Vice President and General Manager - Reactor Restart Division by the RRB. \*

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****4.3 Review Sequence**

The Reactor Operational Readiness Review Flowchart (Exhibit 1) defines the sequence of actions including tasks and responsibilities.

**4.4 Approval Process**

The following steps comprise the approval process: (Exhibit 2)

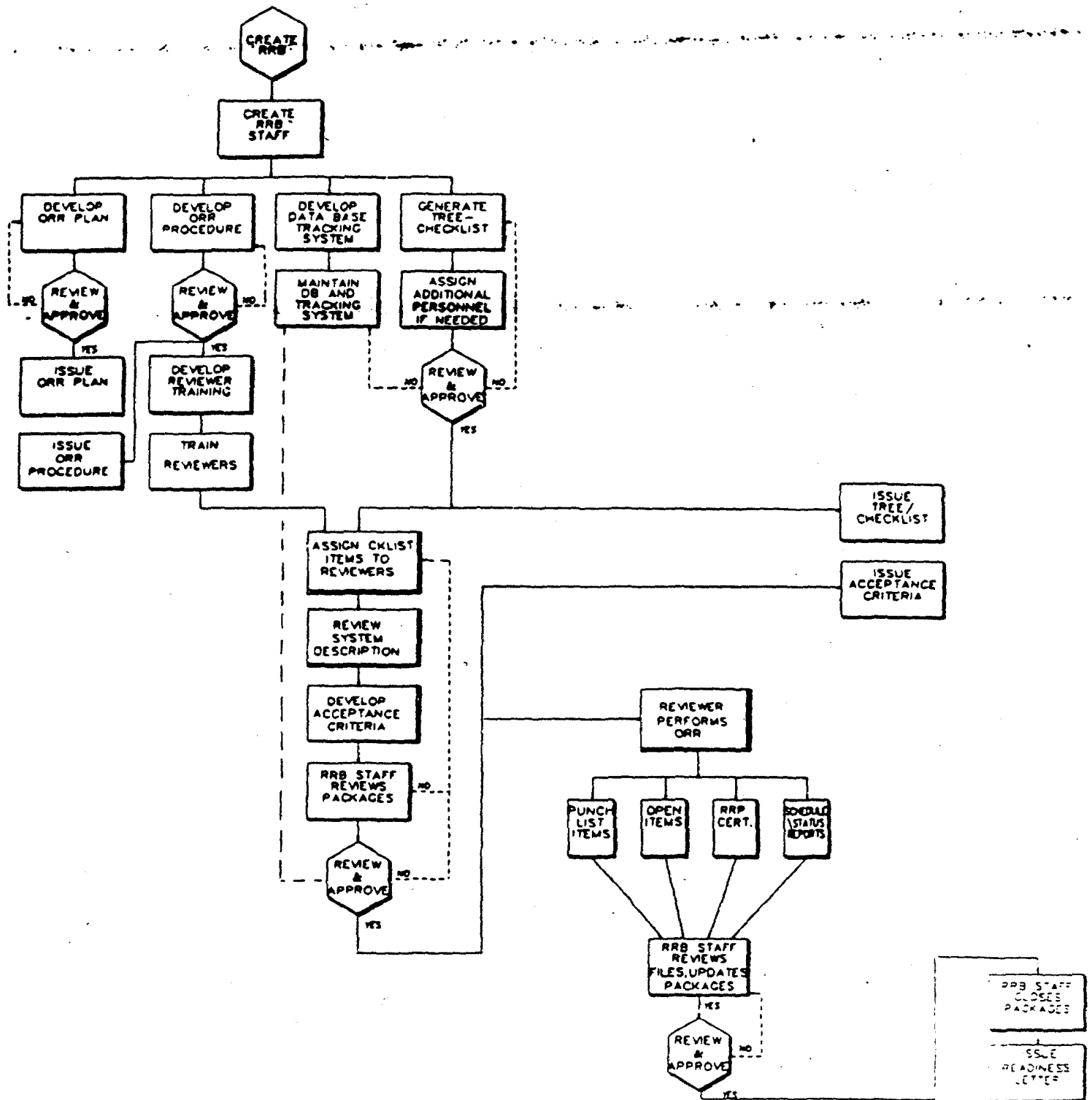
- 4.4.1 Approval of the Reactor Operational Readiness Review Plan and Procedure by the RRB Staff Manager and the Deputy General Manager - Reactor Operations. \*
- 4.4.2 Approval of the checklist by the RRB Staff Manager and the RRB Chairman.
- 4.4.3 Approval of the acceptance criteria by the RRB.
- 4.4.4 Approval of the reactor readiness packages for each part of the phased reactor restart by the RRB.
- 4.4.5 Approval of the open items list showing resolution for each phase by the RRB.
- 4.4.6 Approval of the A and B punchlists for each phase of restart with transmittal to the appropriate line management or designate for completion and completion verification. The ORR Team will verify completion of the A punchlist items.
- 4.4.7 Certification by the Readiness Review Board to the Vice President and General Manager - Reactor Restart Division that the selected reactor is ready for that phase of restart except for A punchlist item completion.
- 4.4.8 Certification by the Readiness Review Board to the Vice President and General Manager - Reactor Restart Division that the A punchlist items for the selected reactor have been resolved. This will be done after the ORR Team has verified resolution of all A punchlist items.



**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

**EXHIBIT 1**

**ORR ACTIVITY FLOWCHART**



REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

EXHIBIT 2

REVIEW AND APPROVAL SUMMARY

ITEM	ORIGINATOR	REVIEWER	APPROVER
ORR Plan	RRB Staff	RRB Staff RRB	RRB Staff Mgr RRB Chairman
ORR Plan Revisions	RRB Staff	RRB Staff RRB	RRB Staff Mgr RRB Chairman
ORR Procedure	RRB Staff	RRB Staff RRB	RRB Staff Mgr RRB Chairman
ORR Procedure Revisions	RRB Staff	RRB Staff RRB	RRB Staff Mgr RRB Chairman
Checklist	RRB Staff	RRB Staff RRB	RRB Staff Mgr RRB Chairman
Review Schedule & Resources	CIR	RRB Staff	
Acceptance Criteria	CIR	RRB Staff	RRB
Reactor Readiness Package	CIR	RRB Staff	RRB
Punchlist	RRB Staff	RRB Staff	RRB
Open Items	CIR	RRB Staff	RRB
Certification Letter - Reactor Readiness	RRB Chairman		
RRB Correspondence	RRB Staff		

CIR = Checklist Item Reviewer

Mgr = Manager

ORR = Reactor Operational Readiness Review

RRB = Readiness Review Board

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****5.0 READINESS REVIEW BOARD (RRB)**

This section defines the organization and responsibilities of the RRB.

**5.1 Organization**

- 5.1.1 The RRB Chairman will be the Deputy General Manager - Reactor Operations. \*
- 5.1.2 The RRB will consist of 9 members or alternates as described in the "Reactor Restart Operational Readiness Review Plan" OPS-SAM-890009, latest revision. \*
- 5.1.3 Alternates are full voting members of the RRB and are expected to attend meetings that pertain to their line responsibility.
- 5.1.4 An RRB quorum is defined as the Chairman or Vice-Chairman plus four primary or alternate members present. \*
- 5.1.5 The RRB may have several non-voting observers from ESH&QA RSES, ESH&QA QA, DOE-SR, and/or other interested groups.
- 5.1.6 The Chairman or Vice-Chairman will set the meeting schedule for the RRB.
- 5.1.7 The RRB may delegate its responsibilities to the RRB Staff as appropriate. Such action will be recorded in the meeting minutes.

**5.2 Responsibilities**

- 5.2.1 The Chairman of the RRB is responsible for the Reactor Operational Readiness Review.
- 5.2.2 The RRB Staff will assist the RRB in conducting the Reactor Operational Readiness Review.
- 5.2.3 The RRB will approve the ORR Plan after review. The RRB Chairman will then sign the plan.
- 5.2.4 The RRB will approve the ORR Procedure after review. The RRB Chairman will then sign the Procedure.
- 5.2.5 The RRB will approve the checklist.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- 5.2.6 The RRB will approve the acceptance criteria after review. The RRB Chairman will then sign the acceptance criteria.
- 5.2.7 The RRB will review and approve the open items and proposed disposition. The RRB Chairman will then sign.
- 5.2.8 The RRB will review and approve the A and B punchlist. The RRB Chairman will then sign.
- 5.2.9 The RRB will be responsible for final resolution of all comments and concerns.
- 5.2.10 The RRB will certify that the selected reactor is ready for that phase of restart.
- 5.2.11 The RRB will be responsible for assigning additional manpower and establishing priorities as necessary to ensure the review process is adequately staffed.

**6.0 READINESS REVIEW BOARD STAFF (RRB STAFF)**

This section defines the organization and responsibilities of the RRB Staff.

**6.1 Organization**

- 6.1.1 The RRB Staff will nominally be comprised of a manager, several technical personnel, a database expert and clerical support.
- 6.1.2 Temporary personnel will be assigned to the staff as required. The cognizant system engineers will be utilized during the review phase.

**6.2 Responsibilities**

- 6.2.1 The RRB Staff will prepare and maintain the ORR Plan.
- 6.2.2 The RRB Staff will prepare and maintain the ORR Procedure.
- 6.2.3 The RRB Staff will prepare and maintain the checklist.
- 6.2.4 The RRB Staff will prepare and maintain the database for the basic elements, the open items, the punchlist items and the completed items.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- 6.2.5 The RRB Staff will prepare and conduct and document the ORR training for any personnel temporarily assigned as checklist item reviewers.
- 6.2.6 The RRB Staff will review the acceptance criteria for completeness and uniformity before transmittal to the RRB.
- 6.2.7 The RRB Staff will review the open items and maintain a log.
- 6.2.8 The RRB Staff will assist in the disposition of open items.
- 6.2.9 The RRB Staff will review the readiness review packages for completeness and accuracy before approval by the RRB.
- 6.2.10 The RRB Staff will maintain a log of comments or responses to and from the ORE Team or DOE-SR and the RRB.
- 6.2.11 The RRB Staff will provide disposition for the comments or responses to and from the ORE Team or DOE-SR.
- 6.2.12 The RRB Staff will issue minutes of the RRB meetings.
- 6.2.13 The RRB Staff will provide assistance to the ORE and DOE-SR teams during the ORR.
- 6.2.14 The RRB Staff will transmit to the ORE and DOE-SR teams copies of the ORR Plan, Procedure, checklist, open items, open item disposition, and punchlists. The RRB Staff will also transmit to the ORE and DOE-SR team copies of the acceptance criteria and readiness packages as requested.

**6.3 Qualification**

The ORR Team members will have technical degrees and 5 years of nuclear experience or 10 years nuclear experience with no degree. Exceptions will be approved by the RRB and documented.

**6.4 Training**

- 6.4.1 Each member of the ORR Team will receive training on the following:
- \* Contractor ORR Plan and Procedure
  - \* DOE-SR Order and Manual on ORRs
  - \* Reactor Operations Management Plan
  - \* DOE Safety Evaluation Report
- 6.4.2 At least one member of the ORR Team will have formal training in MORT.

## REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

### 7.0 CHECKLIST ITEM REVIEWER (CIR)

This section defines the responsibilities of the CIR. CIR's are normally members of the RRB staff.

- 7.1 The CIR will identify the checklist item requirements for that phase.
- 7.2 The CIR will develop the acceptance criteria reflecting the phased reactor restart as needed.
- 7.3 The CIR will review the checklist item against the approved acceptance criteria.
- 7.4 The CIR will prepare the reactor readiness package showing the checklist item meets all/part of the acceptance criteria.
- 7.5 The CIR will document open items resulting from the review.
- 7.6 If necessary, the CIR will assist in defining the resources and schedule for resolving any open items.
- 7.7 The CIR will identify any A or B punchlist items in the reactor readiness package.

### 8.0 OTHER GROUPS

#### 8.1 ESH&QA Division Reactor Safety Evaluation Section Operational Readiness Evaluation Team (RSES - ORE Team)

- 8.1.1 The ORE Team will assess the ORR process and the execution quality of the ORR.
- 8.1.2 The ORE Team will inform the RRB or RRB Staff Manager, in a timely manner, of any concerns arising from their review.
- 8.1.3 The ORE Team will report their recommendations through their organization to the Vice President and General Manager ESH&QA Division.

#### 8.2 ESH&QA Division Quality Assurance Section (QA)

- 8.2.1 The QA Team will assess the ORR process and the execution quality of the ORR.

## REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

8.2.2 The QA Team will inform the RRB or RRB Staff Manager, in a timely manner, of any concerns arising from their review.

8.2.3 The QA Team will report their recommendations through their organization to the Vice President and General Manager ESH&QA Division.

### 8.3 Manager - Reactor Safety Improvement Program (Manager RSIP)

The Manager - RSIP will review the RSIP initiatives for any restart impact and inform the RRB of any concerns. The Manager - RSIP will, when requested, incorporate a disposition (or part of a disposition) into RSIP. The Manager - RSIP shall provide the RRB with documentation of such items prior to the RRB affirming reactor restart readiness.

### 8.4 Observers

The observers shall be from RSES and QA from ESH&QA Division along with DOE-SR and other interested groups. The major benefit from the use of observers will be in maintaining communications.

## 9.0 DEPTH OF REVIEW

This section provides help for determining the necessary depth of review for a checklist item. The RRB will approve the depth during the acceptance criteria approval.

9.1 The following questions will be used to determine the review depth:

- \* Has this item been modified, implemented or installed since the last startup?
- \* Is this item poorly documented or poorly understood?

If any response is yes, then that item is to be reviewed in depth. If the response is no, then that item will not be reviewed in depth.

9.2 The ORR shall touch on all the checklist items specifically. The Charlotte Restart Criteria and the Westinghouse Independent Review items will not be reviewed directly but will be covered by the review of the related checklist item.

9.3 The ORR shall concentrate on those areas which have had addition or change, or where there is special concern. This will maximize the effectiveness of the review and help identify any programmatic problems. This will also focus on the potential problem areas.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****10.0 REACTOR RESTART ITEM DETERMINATION**

This section provides help in determining if a checklist item is required for that phase of the reactor restart.

The following questions which are used in the Reactors Issues Management Program Restart Screening should be answered to determine if the item is required for that part of the phased reactor restart.

- \* Does this item involve a safety system or its supporting systems/components?
- \* Does this item involve processes, functions, or components described in the Safety Analysis Report?
- \* Does this item involve processes, functions, or components delineated in the Technical Specifications or Technical Standards?
- \* Does this item involve processes, functions, or components described in the Nuclear Safety Control Procedures?
- \* Does this item involve potential adverse environmental impact exceeding regulatory release limits (radiological, thermal, chemical, etc.) as a result of reactor operations?
- \* Should this item be considered by the Restart Issue Management Program for another reason(s)? (e.g. non-safety processes, functions, or components impacting safety-related processes, functions, or components)

If the answer to any of the above questions is yes, then answer the questions below.

- \* Does the loss of operability of the item prevent reactor shutdown, maintenance of required shutdown margin, long term cooling, or essential monitoring?
- \* Does the loss of operability of the item require operator action in less than 10 minutes to prevent or mitigate the consequences of events described in the SRS safety analyses?
- \* Does the loss of operability of the item cause operation outside the Technical Specifications?
- \* Does the loss of operability of the item result in a reduction in the margin of safety as described in the SRS safety analyses?



**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- \* Does the loss of the operability of this item result in insufficient ability to comply with regulatory limits for environmental releases resulting from reactor operations?

If any response is yes, then that item is to be included in that review phase. If the response is no, then that item will not be included in that review phase. If you are unsure, consult the Issue Management Section for assistance.

**11.0 CHECKLIST**

- 11.1 This section provides instructions for preparing and using the checklist.
  - 11.1.1 The checklist will be developed from the ORR tree.
  - 11.1.2 Basic elements will be added to the checklist by the RRB Staff to form the matrix. The major sources for the basic elements will be the Reactor Operations Management Plan (ROMP) Volumes 1, 2, 3, and 4 along with the detailed schedule.
  - 11.1.3 The traceability of a basic element item to its source document will be maintained through the matrix database.
  - 11.1.4 The checklist will be maintained by the RRB Staff.
  - 11.1.5 The checklist will be reviewed and approved by the RRB.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****EXHIBIT 3****REACTOR RESTART ORR CHECKLIST****1. HARDWARE****A. STRUCTURES**

01. REACTOR BUILDING (105)
02. CW RESERVOIR (186 Basin)
03. CW PUMP HOUSE (190)
04. RECIRCULATION RESERVOIR (107)
05. BOOSTER PUMP BUILDING (191)
06. AUXILIARY PLANT STRUCTURES

**B. SYSTEMS**

01. REACTOR and AUXILIARY SYSTEMS
  - 01.01 PROCESS WATER
  - 01.02 PW PUMP DRIVE MOTORS
  - 01.03 REACTOR TANK PRESSURE RELIEF
  - 01.04 REACTOR TANK SHIELD COOLING SYSTEM
  - 01.05 BLANKET GAS SYSTEM
02. ENGINEERED SAFETY FUNCTIONS
  - 02.01 EMERGENCY COOLING SYSTEM
  - 02.02 CONTAMINATED WATER REMOVAL and STORAGE
  - 02.03 MODERATOR RECOVERY
  - 02.04 SUPPLEMENTARY SAFETY SYSTEM
  - 02.05 PROCESS ROOM SPRAY SYSTEM
  - 02.06 CONFINEMENT HEAT REMOVAL
  - 02.07 GANG TEMPERATURE MONITOR
  - 02.08 AUTOMATIC INCIDENT ACTION
03. WATER SYSTEMS
  - 03.01 COOLING WATER
  - 03.02 D-MACHINE COOLING WATER
  - 03.03 AUXILIARY WATER SYSTEMS
04. VENTILATION
  - 04.01 AIRBORNE ACTIVITY CONFINEMENT SYSTEM
  - 04.02 AUXILIARY BUILDING VENTILATION
  - 04.03 CONTROL ROOM

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****EXHIBIT 3****REACTOR RESTART ORR CHECKLIST**

- 05. SERVICE SYSTEMS
  - 05.01 COMPRESSED GASES
  - 05.02 FIRE PROTECTION
  - 05.03 AUXILIARY SERVICE SYSTEMS
- 06. ELECTRICAL SYSTEMS
  - 06.01 HIGH VOLTAGE DISTRIBUTION
  - 06.02 EMERGENCY POWER
  - 06.03 SAFETY RATED 120 VAC
- 07. CONTROL and INSTRUMENTATION SYSTEMS
  - 07.01 SCRAM INSTRUMENT SYSTEMS
  - 07.02 ACTUATOR SYSTEM
  - 07.03 RADIATION MONITORING
  - 07.04 AREA COMMUNICATIONS
  - 07.05 PROCESS MONITORING and CONTROL
  - 07.06 COMPUTERS
  - 07.07 MISCELLANEOUS MONITORING
  - 07.08 REMACS/REDAC
- 08. FUEL and TARGET HANDLING and STORAGE
  - 08.01 C&D MACHINES and AUXILIARY EQUIPMENT
  - 08.02 DISASSEMBLY
  - 08.03 ASSEMBLY
- 09. MISCELLANEOUS
  - 09.01 RESCUE and DECON EQUIPMENT
  - 09.02 RAD WASTE HANDLING
  - 09.03 HP WIND SYSTEM
  - 09.04 SPECIAL EQUIPMENT
- 10. CORE COMPONENTS
  - 10.01 MECHANICAL
  - 10.02 TECHNICAL

**2. PERSONNEL****A. PERSONNEL SELECTION**

- 01. EXEMPT
- 02. NON-EXEMPT/WAGE ROLL

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****EXHIBIT 3****REACTOR RESTART ORR CHECKLIST****B. STAFFING LEVELS**

01. ROD
02. RED
03. RSAT
04. RTAP
05. SUPPORT

**C. TRAINING**

01. ROD
02. RED
03. RSAT
04. RTAP
05. SUPPORT

**D. PROPER PRACTICE**

01. PROCEDURE COMPLIANCE
02. STANDARD PRACTICE/INSTRUCTIONS
03. HP MANUAL COMPLIANCE

**E. PERFORMANCE**

01. AREA
02. INDIVIDUAL

**3. ADMINISTRATIVE CONTROLS****A. OVERALL**

01. ORGANIZATION, RESPONSIBILITIES, AND AUTHORITY

**B. REACTORS**

01. ORGANIZATION AND ADMINISTRATION
02. PROCEDURES
03. INFORMATION
04. ADMINISTRATIVE CONTROLS
05. WORK CONTROL

**C. ESH&QA**

01. SAFETY
02. HEALTH PROTECTION
03. FIRE PROTECTION
04. EMERGENCY PREPAREDNESS
05. ENVIRONMENTAL
06. SECURITY & SAFEGUARDS

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

## EXHIBIT 3

REACTOR RESTART ORR CHECKLISTD. QUALITY ASSURANCEE. TECHNICAL SUPPORT

01. SRL
02. ENGINEERING & PROJECTS

F. REACTOR IMPROVEMENT PROGRAMS

01. REACTOR ISSUES MANAGEMENT
02. MODIFICATION PROGRAMS
  - .01 Seismic
  - .02 Baseline
  - .03 MOVATS
  - .04 Startup Test Program
  - .05 Reactor Power Limits
  - .06 Reactor Operating Envelope
  - .07 Configuration Management
03. REACTOR SAFETY IMPROVEMENT PROGRAM
04. SER DESIGN ISSUES
  - .01 Control Rod Drive System Reliability
  - .02 Essential Core Monitoring
  - .03 Spurious Controls Operations
  - .04 Environmental Qualification
  - .05 Airborne Activity Confinement
  - .06 Safe Shutdown
  - .07 Sump Water Removal
  - .08 Systems Integrity
  - .09 Core Design
05. CULTURE CHANGE

G. ROMP WORK SCOPE SECTIONS

01. CHARLOTTE CRITERIA
02. WESTINGHOUSE INDEPENDENT SAFETY REPORT
03. Outage Work
04. RESTART QUALITY ASSURANCE PROGRAM
05. DOE Added Work Scope
06. RIMP Work Scope
07. SER Added Work Scope

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****12.0 ACCEPTANCE CRITERIA**

12.1 This section provides instructions for developing and using the acceptance criteria.

Generic acceptance criteria will be utilized for many of the hardware checklist items to maximize the effectiveness of the ORR effort. A list of specific basic elements for each hardware checklist item will be developed for review against that related generic acceptance criteria (i.e., preventive or corrective maintenance, project modifications, etc.). The detailed list of basic elements will be updated during the duration of the ORR to ensure timeliness. Selected examples of generic acceptance criteria for a hardware checklist item are shown in Attachment 1. \*

Generic acceptance criteria will also be utilized for many of the non-hardware items contained in ROMP Volumes 2, 3, and 4 (for K, L, & P reactors respectively). The specific acceptance criteria defined in each restart work item scope will be used for closure. Selected examples of these generic acceptance criteria are shown in Attachment 2. \*

- 12.1.1 The acceptance criteria will be prepared by the checklist item reviewer.
- 12.1.2 The acceptance criteria will be reviewed for adequacy and consistency by the RRB Staff.
- 12.1.3 The acceptance criteria will be reviewed, approved and issued by the RRB.
- 12.1.4 The acceptance criteria will be structured so that the appropriate basic elements have been addressed.
- 12.1.5 The acceptance criteria will consist of objective, measurable and documentable conditions.
- 12.1.6 The acceptance criteria shall define the measuring device as well as the specific measure.
- 12.1.7 Whenever possible the acceptance criteria should relate to accepted industry standards or codes.
- 12.1.8 Any assumptions made in developing the acceptance criteria shall be recorded on the form.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

12.1.9 The acceptance criteria will be given a separate number so more than one basic element can be included in one acceptance criteria.

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

EXHIBIT 4

12.2 FORM A1: ACCEPTANCE CRITERIA

PAGE      OF

REVIEWER NAME:

DATE:

ITEM #:

TITLE:

FOR RESTART PHASE 1-2 ? (Indicate one)

DESCRIPTION OF BASIC ELEMENT(S) AND NUMBER(S):

ACCEPTANCE CRITERIA:

ASSUMPTIONS:

RRB STAFF REVIEW:

DATE:

RRB APPROVAL:

DATE:



REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDUREINSTRUCTIONS FOR FORM A1: ACCEPTANCE CRITERIA

PAGE: OF

This is for numbering the pages of this form used.  
(1 of 5)

REVIEWER NAME:

This is the name of the checklist item reviewer.  
(John T. Jones)

DATE:

This is the date the form was filled out.  
(December 3, 1988)

ITEM #:

This is the acceptance criteria number. The acceptance criteria number is the same as the checklist item number with 3 additional digits added. The - 002 indicates that this is the second acceptance criteria for that checklist item.  
(1.A.1.3-002)

TITLE:

This is the checklist item name.  
(CW Pump House)

FOR RESTART PHASE 1-2 (INDICATE ONE)

The earliest required restart phase shall be identified.  
(2)

DESCRIPTION OF BASIC ELEMENT(S) AND NUMBER(S):

This is the basic element from this checklist item that is being addressed. The basic element number shall also be shown.  
(1125 - REMACS)

ACCEPTANCE CRITERIA:

This is the proposed acceptance criteria corresponding to the basic item being addressed.  
(A250 - The REMACS project will be considered complete when the...)

ASSUMPTIONS:

List any assumptions used in developing the acceptance criteria.  
(The water treatment was not considered.)

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

RRB STAFF REVIEW:

This is to be signed by a RRB Staff member after RRB Staff review.  
This person will be different than the checklist item reviewer.  
(James T. Jones)

DATE:

This is the date the RRB Staff member signed the form.  
(December 5, 1988)

RRB APPROVAL:

This is to be signed by a RRB member after RRB review and approval.  
(James L. Jones)

DATE:

This is the date the RRB member signed the form.  
(December 6, 1988)

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****13.0 REACTOR READINESS PACKAGE (RRP)**

13.1 This section provides instructions for the preparation of the Reactor Readiness Package.

13.1.1 The RRP will be prepared by the checklist item reviewer.

13.1.2 The RRP will be identified to reflect the applicable checklist item for traceability.

13.1.3 The RRP will contain documentation that the item reviewed meets the acceptance criteria.

13.1.4 The RRP will contain copies of the following documents as a minimum:

- \* Certificate of readiness,
- \* Open item document with approved disposition,
- \* A and B punchlist items,
- \* Any analysis sheets prepared by the reviewer,
- \* Final acceptance criteria,
- \* Listing of basic element(s) for that criteria,
- \* Any documents utilized that are not readily available,
- \* Listing of documents used for closure.

For example, each preventive maintenance basic element will be listed on the attachment to the preventive maintenance acceptance criteria. This same list will be used to show the results of the field review and attached to the preventive maintenance certificate of readiness for that checklist item. If each of the preventive maintenance basic elements are found acceptable, no further documentation will be provided. However, if there is a problem, then additional documentation defining the problem and corrective action will be included.

13.1.5 The RRP will be reviewed by the RRB Staff for thoroughness and completeness.

13.1.6 The RRP will be approved by the RRB.

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

EXHIBIT 5

13.2 FORM B2: CERTIFICATE OF READINESS

REVIEWER NAME:

DATE:

ITEM TITLE:

ACCEPTANCE CRITERIA #:                    FOR RESTART PHASE 1-2 (INDICATE ONE)

HAS ACCEPTANCE CRITERIA BEEN MET? (INDICATE ONE) YES / NO

SUMMARY OF ASSESSMENT ACTIVITIES SUPPORTING READINESS:

NUMBER OF OPEN ITEMS RESOLVED:

NUMBER OF A PUNCHLIST ITEMS TO BE COMPLETED:

NUMBER OF B PUNCHLIST ITEMS TO BE COMPLETED:

CERTIFICATION OF OPERATIONAL READINESS:

REVIEWER: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB STAFF REVIEW: \_\_\_\_\_

DATE: \_\_\_\_\_

RRB APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDUREINSTRUCTIONS FOR FORM B2: CERTIFICATE OF READINESS

## REVIEWER NAME:

This is the name of the checklist item reviewer.  
(John T. Jones)

## DATE:

This is the date the form was filled out.  
(December 3, 1988)

## ITEM:

This is the checklist item number.  
(1.B.01.03)

## TITLE:

This is the checklist item name.  
(CW Pump House)

## ACCEPTANCE CRITERIA #:

This is the acceptance criteria number.  
(1.B.03.01-502)

## RESTART PHASE 1-2 (INDICATE ONE):

The earliest required restart phase shall be identified. This applies to the certificate of readiness.  
(2)

## SUMMARY OF ASSESSMENT ACTIVITIES SUPPORTING READINESS:

This is a brief one or two paragraph summary of the assessment activities that support readiness.  
(The CW pump house is ready because all the start-up testing has been completed without problems, all preventive and corrective maintenance activities have been completed...)

## NUMBER OF OPEN ITEMS RESOLVED:

This is the number of open items generated and resolved.  
(None)

## NUMBER OF A PUNCHLIST ITEMS TO BE COMPLETED:

This is the number of A punchlist items that must be completed for total readiness for that phase.  
(8)

## NUMBER OF B PUNCHLIST ITEMS TO BE COMPLETED:

This is the number of B punchlist items to be completed.  
(2)

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****REVIEWER:**

The appropriate checklist item reviewer will sign here.  
(John T. Smith)

**DATE:**

This is the date the checklist item reviewer signed the form.  
(December 4, 1988)

**RRB STAFF REVIEW:**

This is to be signed by a RRB Staff member after RRB Staff review  
and approval.  
(James T. Jones)

**DATE:**

This is the date the RRB Staff member signed the form.  
(December 5, 1988)

**RRB APPROVAL:**

This is to be signed by a RRB member after RRB review and approval.  
(James L. Jones)

**DATE:**

This is the date the RRB member signed the form.  
(December 6, 1988)

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****14.0 PUNCHLIST**

This section provides instructions for recording and tracking punchlist items.

- 14.1 The checklist item reviewer will note any punchlist items on the certification of readiness.
- 14.2 The punchlist item numbers will be assigned sequentially and logged by the RRB Staff.
- 14.3 There will be two (2) punchlists - A and B:
  - \* Punchlist A will consist of items requiring completion before that restart phase and will be tracked and verified by the ORR Team.
  - \* Punchlist B will consist of items not requiring completion before that restart phase and will be tracked by existing procedure and controls.
- 14.4 The punchlist will contain the following information:
  - \* Name of the reviewer
  - \* Date item entered on punchlist
  - \* Punchlist item number
  - \* Punchlist item description
  - \* System for completing the item
  - \* Checklist item number
  - \* Checklist item name
  - \* Punchlist A or B
  - \* Required restart phase
  - \* Date of completion
- 14.5 The punchlist item will be traceable back to the checklist through the matrix.
- 14.6 The punchlist will be managed by the RRB Staff.
- 14.7 The punchlist will be approved by the RRB.
- 14.8 The A punchlist items for that part of the phased restart must be completed before restart.
- 14.9 Punchlist items will be completed by existing groups (RPD, ROD, RED, etc.) through existing systems (MIAC, procedures, etc.).
- 14.10 The completion of the required A punchlist items will be verified by the ORR Team member and the RRB will be notified by the ORR Team when all A punchlist items are completed.

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****15.0 OPEN ITEMS**

15.1 This scope provides instructions for preparation of Open Item Form (B1) and for disposition.

15.1.1 The open item form will be completed by the checklist item reviewer.

15.1.2 The open item numbers will be assigned sequentially and logged by the RRB Staff.

15.1.3 The open item list will contain the following information:

- \* Name of the reviewer
- \* Date item entered as open item
- \* Open item number
- \* Open item title
- \* Acceptance criteria number
- \* Checklist item number
- \* Checklist item title
- \* Required restart phase
- \* Open item disposition
- \* Date of disposition

15.1.4 The proposed open item disposition from the form will be reviewed and approved or revised by the RRB Staff.

15.1.5 The proposed/revised disposition will then be sent to the RRB for approval.

15.1.6 The open items and their disposition will be reviewed and managed by the RRB Staff.

15.1.7 The open items list will be approved by the RRB.

15.1.8 All open items must be dispositioned and the disposition closed for that phase of the ORR to be completed.



REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

EXHIBIT 6

15.2 FORM B1: OPEN ITEM

REVIEWER NAME:

DATE:

OPEN ITEM #:

TITLE:

ACCEPTANCE CRITERIA #:

TITLE:

EXPLANATION OF OPEN ITEM:

OPEN ITEM REQUIRES DISPOSITION PRIOR TO RESTART PHASE 1-2 (INDICATE ONE)

RECOMMENDATION:

RRB STAFF REVIEW:

DATE:

DESCRIPTION OF DISPOSITION:

REFERENCES:

OPEN ITEM APPROVAL:

REVIEWER APPROVAL:

DATE:

RRB STAFF APPROVAL:

DATE:

RRB APPROVAL:

DATE:

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****INSTRUCTIONS FOR FORM B1: OPEN ITEM****REVIEWER NAME:**

This is the name of the checklist item reviewer.  
(John T. Jones)

**DATE:**

This is the date the form was filled out.  
(December 3, 1988)

**OPEN ITEM:**

The open item number will be entered here. The numbers will be sequential and assigned by the RRB Staff.  
(29)

**TITLE:**

This is the open item name.  
(Inadequate Pump Capacity - Moderator Recovery)

**ACCEPTANCE CRITERIA #:**

This is the acceptance criteria number.  
(1.B.03.01-510)

**TITLE:**

This is the acceptance criteria name.  
(CW Pump House)

**EXPLANATION OF OPEN ITEM:**

The open item that needs to be resolved will be described.  
(The new pump for moderator recovery does has inadequate..)

**OPEN ITEM REQUIRES DISPOSITION PRIOR TO PHASE 1-2 RESTART? (INDICATE ONE)**

The earliest restart phase shall be identified.  
(1)

**RECOMMENDATION:**

The proposed disposition for meeting the acceptance criteria will be described.  
(Purchase new pump with adequate capacity)

**RRB STAFF REVIEW:**

This is to be signed by a RRB Staff member (not the CIR) after RRB Staff review and support of the recommendation.  
(James T. Jones)

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

## DATE:

This is the date the RRB Staff member signed the form.  
(December 5, 1988)

## DESCRIPTION OF DISPOSITION:

Any revisions to the proposed disposition for meeting the acceptance criteria will be described here.  
(None)

## REFERENCES:

List the documents/discussions used to generate the revised disposition.  
(SP 234)

## REVIEWER APPROVAL OF OPEN ITEM DISPOSITION:

This is to be reviewed and signed by the checklist item reviewer who originated this open item.  
(John T. Jones)

## DATE:

This is the date the checklist item reviewer reviewed the open item disposition and signed the form.  
(December 6, 1988)

## RRB STAFF APPROVAL OF OPEN ITEM DISPOSITION:

This is to be signed by a RRB Staff member after review.  
(James L. Jones)

## DATE:

This is the date the RRB Staff member signed the form.  
(December 6, 1988)

## RRB APPROVAL OF OPEN ITEM DISPOSITION:

This is to be signed by a RRB member after RRB review and approval.  
(James L. Jones)

## DATE:

This is the date the RRB member signed the form.  
(December 6, 1988)

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****16.0 REVISIONS**

- 16.1 This section defines how to revise any previously approved form or document.
  - 16.1.1 The same level of review and approval will be required for the revision as was for the original.
  - 16.1.2 Any revision must have a documented justification.
  - 16.1.3 Form B3 will be used to provide traceability for all revisions.
  - 16.1.4 The revision numbers will be assigned sequentially and logged by the RRB Staff.
  - 16.1.5 All revised documents will be retyped and reissued to the original distribution.

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

EXHIBIT 7

16.2 FORM B3: REVISION TO APPROVED DOCUMENT

REVIEWER NAME:

REVISION #:

DATE:

ITEM #:

TITLE:

DOCUMENT REVISED:

DATED:

DESCRIBE THE PROPOSED REVISION:

DESCRIBE TECHNICAL JUSTIFICATION FOR REVISION:

ITEM REQUIRES DISPOSITION PRIOR TO RESTART PHASE: 1-2?  
(INDICATE EARLIEST PHASE)

RRB STAFF REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_

RRB APPROVAL: \_\_\_\_\_ DATE: \_\_\_\_\_

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****INSTRUCTIONS FOR FORM B3: REVISION TO APPROVED DOCUMENT****REVIEWER NAME:**

This is the name of the person preparing this form.  
(John T. Jones)

**REVISION #:**

The revision number will be entered here. The numbers will be sequential and assigned by the RRB Staff.  
(23)

**DATE:**

This is the date the form was filled out.  
(December 3, 1988)

**ITEM #:**

This is the item number being revised. It could be a checklist item, a punchlist item, an open item, the ORR Plan, etc. The number helps locate the area being revised.  
(1.A.01.03)

**TITLE:**

This is a description of the item being revised.  
(Rename the rod drive to actuator system)

**DOCUMENT REVISED:**

This is the name of the document being revised.  
(ORR Checklist)

**DATED:**

This is the date on the document being revised.  
(December 3, 1988)

**DESCRIBE THE PROPOSED REVISION:**

This describes the proposed revision to the document.  
(The title of the hardware system "rod drives" was changed to "actuator system to better cover the system.)

**DESCRIBE TECHNICAL JUSTIFICATION FOR REVISION:**

This describes the technical justification for the revision.  
(The actuator system better describes this system.)

**ITEM REQUIRES DISPOSITION PRIOR TO RESTART PHASE 1-2? (INDICATE EARLIEST PHASE)**

The earliest restart phase shall be identified.  
(2)

REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE

RRB STAFF REVIEW:

This is to be signed by a RRB Staff member after RRB Staff review and approval.

(James T. Jones)

DATE:

This is the date the RRB Staff member signed the form.  
(December 5, 1988)

RRB APPROVAL:

This is to be signed by a RRB member after RRB review and approval.

(James L. Jones)

DATE:

This is the date the RRB member signed the form.  
(December 6, 1988)

**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE****17.0 REPORTING**

- 17.1 Reports on the ORR status, problem areas, and success areas will be part of the Readiness Review Board meeting agenda.
- 17.2 Periodic written status reports will be issued to keep Reactor Restart management informed about the ORR.
- 17.3 A management summary report will be issued for the ORR for the Fuel Load, Power Operation, and follow-up phases.
- 17.4 A detailed report will be issued for the ORR for the Fuel Load, Power Operation, and follow-up phases. Each detailed ORR report will contain the following sections:
- \* Summary
  - \* Introduction
  - \* Description of the ORR process
  - \* Results
  - \* Approvals
  - \* Appendices (as needed)
- 17.5 DOE-SR will receive formal notification when the K Reactor Fuel Load ORR is completed and when the K, L, & P Reactor Power Operation ORRs are completed. DOE-SR will receive verbal notification through the RRB meetings on the approved acceptance criteria and readiness packages as well as significant issues and periodic progress reports.

**18.0 CLOSURE**

- 18.1 The RRB Staff Manager will inform the RRB when the ORR for that phase has been completed. This will occur when all the readiness packages for that phase have been completed, no open items exist for that phase, and A & B checklists have been prepared for execution by line management.
- 18.2 The RRB will then certify that K Reactor is ready for that phase of operation after line management has completed all the A punchlist items.
- 18.3 The RRB will notify the Vice President & General Manager - Reactor Restart that K Reactor is ready for that phase of operation after line management has completed all A punchlist items.



**REACTOR RESTART OPERATIONAL READINESS REVIEW PROCEDURE**

- 18.4 The Vice President & General Manager - Reactor Restart will then notify the President - WSRC that K Reactor is ready for that phase of operation after line management has completed all A punchlist items.

**19.0 REFERENCES**

- 19.1 Whitsett, John, Operational Readiness Review Handbook, August 29, 1988 Draft.
- 19.2 INPO 85-001, Performance Objectives and Criteria for Operating and Near-term Operating License Plants, Institute of Nuclear Power Operations, Revision 01, April 1987
- 19.3A Manual SROM 548X.1, Preparation and Performance of Operational Readiness Reviews, DOE Savannah River Operations Office, Revision 1, December 18, 1986.
- 19.3B Manual SROM 548X.1A, Preparation and Performance of Operational Readiness Reviews, DOE Savannah River Operations Office, Revision 2, June 30, 1989 Draft.
- 19.4A Order SR 548X.1, Operational Readiness Reviews, DOE Savannah River Operations Office, June 30, 1989 Draft.
- 19.4B Order SR 548X.1A, Operational Readiness Reviews, DOE Savannah River Operations Office, August 10, 1987.
- 19.5 Lukosius, E. J., Operational Readiness Reviews Contractor Manual, October 12, 1988 Draft.
- 19.6 WSRC-SAR-RX-01, Savannah River Site Production Reactor Safety Analysis Report, WSRC-SAR-RX-K, WSRC-RP-89-383, Draft, July 17, 1989
- 19.7 OPS-SAM 890008, Reactor Restart Operational Readiness Review Plan, Rev.4, November 9, 1990. \*
- 19.8 WSRC.1.01 MP 4.14, Operational Readiness Reviews, WSRC, Rev. 0, April 1, 1989.
- 19.9 WSRC-T1, Nuclear Safety Control Procedures, WSRC, Rev. 0, September 5, 1989 Draft.
- 19.10 WSRC-RP-89-368, Reactor Operations Management Plan, WSRC, Rev. 3, April 10, 1990.

ATTACHMENT 1

K REACTOR ORR  
ACCEPTANCE CRITERIA  
(name) SYSTEM READINESS

PAGE of 2

REVIEWER NAME:

Date:

ITEM #: 1.x.##.##-001

RESTART PHASE: FUEL LOAD

COMPOSITE DESCRIPTION OF CHECKLIST ITEM:

Readiness of the system to support fuel load.

ACCEPTANCE CRITERIA:

The system will be ready when the following associated conditions have been met:

1. Testing identified under the Startup Test Program has been completed/closed as noted under Startup Testing Acceptance Criteria 1.x.##.##-002 and the associated attachment.
2. Project Modifications have been completed/closed as noted under Project Modification Acceptance Criteria 1.x.##.##-003 and the associated attachment.
3. Periodic DPSOLs have been completed as noted under Periodic DPSOL Acceptance Criteria 1.x.##.##-004 and the associated attachment.
4. Corrective Maintenance items have been completed/closed as noted under Corrective Maintenance Acceptance Criteria 1.x.##.##-005 and the associated attachment.

**ATTACHMENT 1**

**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**

PAGE of 2

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.X.##.##-001

**RESTART PHASE:** FUEL LOAD

5. Preventive Maintenance items have been completed/closed as noted under Preventive Maintenance Acceptance Criteria 1.x.##.##-006 and the associated attachment.

6. Nonconformance Reports and Corrective Action Reports have been closed or have approved conditional releases as noted under Nonconformance Report and Corrective Action Report Acceptance Criteria 1.x.##.##-007 and associated attachment.

7. The Technical Specifications have been reviewed for alignment as noted under the Technical Specification Acceptance Criteria Item 1.x.##.##-008 and the associated attachment.

8. The DPSOLs required to conduct this phase of start up have been reviewed as noted under Routine Operating DPSOLs Acceptance Criteria 1.x.##.##-009 and the associated attachment.

**ASSUMPTIONS:**

None

**RRB STAFF REVIEW:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**RRB APPROVAL:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**ATTACHMENT 1**  
**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**STARTUP TESTING**

PAGE            of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.x.##.##-002

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Completion of Startup Testing for the system to support fuel load. Attachment I lists the required testing.

**ACCEPTANCE CRITERIA:**

The required startup testing will have been verified as complete when:

1. The required startup tests have been executed.
2. Field review (where appropriate) of the in progress startup testing by the ORR engineer.
3. The results of the startup tests have been evaluated by the Startup Test Group and by Reactor Engineering.
4. Nonconforming test results have been dispositioned.

**ASSUMPTIONS:**

None

**ATTACHMENT 1**

**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**PROJECT MODIFICATION**

PAGE of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.x.##.##-003

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Completion of Project Modification items for the system to support fuel load. Attachment I lists the required project modifications.

**ACCEPTANCE CRITERIA:**

Each project modification will have been verified as complete when:

1. The installation is complete and punchlist "A" from the modification package is closed. A check of 10% of the "A" punchlist items will be done.
2. The Project Modification acceptance testing has been completed and resulting action items are completed/closed.
3. DPSOLs referenced in each project modification package have been prepared/revised and issued for use.
4. Affected operations personnel have been made cognizant of the modification.
5. The Control Room drawings have been revised to reflect the modification. (Only 13 systems require P & I drawings at restart.)
6. Incomplete modifications have been evaluated and dispositioned by Reactor Engineering.

**ASSUMPTIONS:**

None

**ATTACHMENT 1**

**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**PERIODIC DPSOLS**

PAGE of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.x.##.##-004

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Completion of Periodic DPSOLS for the system to support fuel load. Attachment I lists the required periodic DPSOLS.

**ACCEPTANCE CRITERIA:**

Each periodic DPSOL will have been verified as complete when:

1. Executed periodic DPSOL is in the area file.

A. When the periodic DPSOL is required to be run on a short time cycle, and the equipment was required to be operational during the outage, DPSOLS are reviewed as follows:

DPSOL required each shift	Last 6 completed DPSOLS
DPSOL required daily	Last 7 completed DPSOLS
DPSOL required weekly	Last 4 completed DPSOLS
DPSOL required monthly	Last 3 completed DPSOLS
DPSOL required quarterly	Last 2 completed DPSOLS
DPSOL frequency longer than qtrly	Last completed DPSOL

The "status DPSOLS" (1851s, 1925PC, etc.) as well as each of the DPSOLS referenced in the "status DPSOLS" will be reviewed.

B. Where equipment has not been required to be operational during the outage, we will verify that the periodic DPSOLS have been or will be completed prior to equipment operation.

2. Any resulting action from the execution of the periodic DPSOL is completed/closed.

**ASSUMPTIONS:**

None

**ATTACHMENT 1**

**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**CORRECTIVE MAINTENANCE**

PAGE of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.x.##.##-005

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Completion of corrective maintenance items for the system to support fuel load. The Outage Management Work List will be used as the source of the corrective maintenance items. Attachment I lists the required corrective maintenance items.

**ACCEPTANCE CRITERIA:**

Corrective Maintenance items will have been verified as completed when:

1. The Work Order has been executed and any action items resulting from implementation of the Work Order have been completed/closed.
2. A Job Plan (if required) has been executed and any action items resulting from implementation of the job plan are completed/closed.
3. Field check indicates job has been executed. (Done where the field check will provide useful information.)
4. Corrective Maintenance items which have not been completed have been evaluated and dispositioned by Reactor Engineering.

**ASSUMPTIONS:**

None

ATTACHMENT 1

K REACTOR ORR  
ACCEPTANCE CRITERIA  
(name) SYSTEM READINESS  
PREVENTIVE MAINTENANCE

PAGE of 2

REVIEWER NAME:

Date:

ITEM #: 1.x.##.##-006

FOR RESTART PHASE: FUEL LOAD

COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):

Completion of Preventive Maintenance items for the system to support fuel load. The Outage Management Work List will be used as the source of the preventive maintenance items.

Attachment I lists the required Preventive Maintenance items.

ACCEPTANCE CRITERIA:

The Preventive Maintenance items selected for the completed work order review will be based on the following:

1. Execution frequency of 12 months or greater
  - 100% of PMs
2. Execution frequency of less than 12 months
  - 10% sampling of PMs or a minimum of 5
  - The 10% sampling will be chosen to cover range of type of PMs by the type of work and by work group
  - If the 10% sample size indicates an implementation problem, then the sample size will be increased to 100%

Preventive Maintenance items will have been verified as complete when:

1. The Work Order has been executed and any action items resulting from implementation of the Work Order have been completed/closed.



**ATTACHMENT 1**  
**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**PREVENTIVE MAINTENANCE**

PAGE            of 2

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.x.##.##-006

**FOR RESTART PHASE:** FUEL LOAD

2. A Job Plan (if required) has been executed and any action items resulting from implementation of the job plan have been completed/closed.
3. Field check indicates job has been executed. (Done where the field check will provide useful information.)
4. Preventive Maintenance Items which have not been completed have been evaluated and dispositioned by Reactor Engineering.

**ASSUMPTIONS:**

None

**ATTACHMENT 1**  
**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**NONCONFORMANCE AND CORRECTIVE ACTION REPORT**

PAGE            of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.X.##.##-007

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Closure of Nonconformance Reports and closure of Corrective Action Reports for the system to support fuel load. The Reactor Quality Assurance Section list of open NCRs and CARs will be used as the source of report items. Attachment I lists the open NCRs and CARs.

**ACCEPTANCE CRITERIA:**

NCR and CAR closure have been verified as complete when:

1. Each NCR is closed or has an approved conditional release.
2. Each CAR is closed or has an approved conditional release.

**ASSUMPTIONS:**

None

**ATTACHMENT 1**  
**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**TECHNICAL SPECIFICATIONS**

PAGE            of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.X.##.##-008

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Alignment of the Technical Specifications with the operating procedures.  
Attachment I lists the applicable Technical Specification requirements.

**ACCEPTANCE CRITERIA:**

Verify that implementing procedures exist for each Technical Specification Requirement.

**ASSUMPTIONS:**

None

**ATTACHMENT 1**  
**K REACTOR ORR**  
**ACCEPTANCE CRITERIA**  
**(name) SYSTEM READINESS**  
**ROUTINE OPERATING DPSOLs**

PAGE of 1

**REVIEWER NAME:**

**Date:**

**ITEM #:** 1.x.##.##-009

**FOR RESTART PHASE:** FUEL LOAD

**COMPOSITE DESCRIPTION OF BASIC ELEMENT(S):**

Availability of the current revision of the routine operational DPSOLs required to support fuel load.

Attachment I lists the pertinent routine operating DPSOLs.

**ACCEPTANCE CRITERIA:**

The availability of the pertinent DPSOLs will be verified when the latest revision of the DPSOLs is in the area ready to be used as required.

**ASSUMPTIONS:**

None

ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
STARTUP TESTING LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-002

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

The following startup testing is required.

PROCEDURE

TITLE

DATE  
VERIFIED

COMMENTS

A     IMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
PROJECT MODIFICATIONS LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-003

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

The following Project Modifications are required.

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u> <u>VERIFIED</u>	<u>COMMENTS</u>
---------------	--------------	--------------------------------	-----------------

ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
PERIODIC DPSOLs LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-004

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

The following periodic DPSOLs are required.

<u>NUMBER</u>	<u>FREQ</u>	<u>TITLE</u>	<u>DATE</u> <u>VERIFIED</u>	<u>COMMENTS</u>
---------------	-------------	--------------	--------------------------------	-----------------

ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
CORRECTIVE MAINTENANCE LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-005

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

The following corrective maintenance items are required.

<u>WORK</u> <u>ORDER</u>	<u>IDP</u> <u>NUMBER</u>	<u>WORK ORDER</u> <u>COMPLETE</u>	<u>TITLE</u>	<u>DATE</u> <u>VERIFIED</u>	<u>COMMENTS</u>
-----------------------------	-----------------------------	--------------------------------------	--------------	--------------------------------	-----------------



ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
PREVENTIVE MAINTENANCE LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-006

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

The following preventive maintenance items are required.

<u>WORK</u> <u>ORDER</u>	<u>IDP</u> <u>NUMBER</u>	<u>WORK ORDER</u> <u>FREQ</u>	<u>COMPLETE</u>	<u>TITLE</u>	<u>DATE</u> <u>VERIFIED</u>	<u>COMMENTS</u>
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ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
NONCONFORMANCE AND CORRECTIVE ACTION REPORT LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-007

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

Listed below are the Nonconformance Reports (NCRs) and Corrective Action Reports (CARs) requiring action.

NCRs

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE CLOSED</u>	<u>COMMENTS</u>
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CARs

<u>NUMBER</u>	<u>TITLE</u>
---------------	--------------

ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
TECHNICAL SPECIFICATIONS LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.x.##.##-008

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

Listed below are the applicable requirements of the Technical Specifications.

TECHNICAL SPECIFICATIONS.  
REQUIREMENT            TITLE

COMMENTS

ATTACHMENT 1  
K REACTOR ORR  
(name) SYSTEM READINESS  
ROUTINE OPERATING DPSOLs LIST

PAGE 1 of

REVIEWER NAME:

FOR ITEM #: 1.X.##.##-009

RESTART PHASE: FUEL LOAD

REVISION:

DATE:

The following operating DPSOLs may be required and should be available.

<u>NUMBER</u>	<u>REV #</u>	<u>TITLE</u>	<u>DATE</u> <u>VERIFIED</u>	<u>COMMENTS</u>
---------------	--------------	--------------	--------------------------------	-----------------

INSTRUCTIONS FOR USING GENERIC,  
NON-HARDWARE ACCEPTANCE CRITERIA

**A. DETERMINE GENERIC DESCRIPTION AND ACCEPTANCE CRITERIA.**

Review each ROMP Restart Work Item Deliverable and determine which GENERIC DESCRIPTION(S) match the deliverable's scope and acceptance criteria; applicable ORR ACCEPTANCE CRITERIA follow.

**1. IF GENERIC DESCRIPTION IS:**

APPROVE AND ISSUE (such as procedures, plans, programs, etc.),  
and/or  
PERFORM (as in a study/evaluation),  
and/or  
ISSUE (as in a procedure, report, technical position paper,  
design request memorandum, etc.),  
and/or  
PLAN/DEVELOP (as an activity, program, etc.);

**THEN THE ACCEPTANCE CRITERIA ARE :**

The documents are verified as approved and/or issued  
(as applicable) and;

a) the organization producing the deliverable has been verified  
to have approved procedural controls in place governing the  
development, revision, and issue of quality related documents,

or,

b) if approved procedural controls are not in place, a review of  
the approved and issued documents for technical, regulatory,  
administrative, and/or applicable Code requirements has been  
performed by the Checklist Reviewer, or another independent  
reviewer, to verify completion of the deliverable scope and  
acceptance criteria.

INSTRUCTIONS FOR USING GENERIC,  
NON-HARDWARE ACCEPTANCE CRITERIA

**A. DETERMINE GENERIC DESCRIPTION & ACCEPTANCE CRITERIA (cont'd)**

**2. IF GENERIC DESCRIPTION IS:**

DOCUMENT/LIST (such as a summary of procedures reviewed or personnel trained);

**THEN THE ACCEPTANCE CRITERION IS:**

The list or other document(s) used by the line organization to satisfy the deliverable acceptance criteria has been reviewed and determined to be complete, controlled, and the latest revision.

**3. IF GENERIC DESCRIPTION IS:**

RESOLVE (as an issue or technical problem);

**THEN THE ACCEPTANCE CRITERION IS:**

The issue or problem, etc., has been verified to be resolved and documented; a review of the actual resolution for technical or programmatic content is not required.

**4. IF GENERIC DESCRIPTION IS:**

IMPLEMENT/COMPLETE (as a plan, procedure, program, test, maintenance, etc.);

**THEN THE ACCEPTANCE CRITERION IS:**

a) The required plan, procedure, program, etc., has been verified as prepared, approved, and issued and measurable, documented results have been achieved (e. g., a backlog of work has been reduced). NOTE: for plans or programs that, due to their scope, are only partially implemented, progress toward full implementation (e. g., increased manpower level) is required to be verified as complying with scheduled milestones;

or,

b) Tests have been verified to be complete and documented, including required reviews and approvals of results by appropriate management.

**ATTACHMENT 2**

**INSTRUCTIONS FOR USING GENERIC,  
NON-HARDWARE ACCEPTANCE CRITERIA**

**A. DETERMINE GENERIC DESCRIPTION & ACCEPTANCE CRITERIA (cont'd)**

**5. IF GENERIC DESCRIPTION IS:**

**TRAIN PERSONNEL;**

**THEN THE ACCEPTANCE CRITERIA ARE :**

The required training has been verified as complete and;

a) the training was conducted under a formal training program by qualified instructors utilizing approved lesson plans and training materials,

or,

b) if training was provided by any other means, a review of the training materials, methods employed, and (applicable) testing has been performed by the Checklist Reviewer, or another independent reviewer. This review shall utilize criteria applicable to the Site Training Organization(s).

**B. INDICATE APPLICABLE ACCEPTANCE CRITERIA NUMBER(S), WHERE REQUIRED, ON NON-HARDWARE BASIC ELEMENTS FORMS.**

**C. INCLUDE A SUMMARY DESCRIPTION OF THE BASIC ELEMENTS WITH THEIR ASSOCIATED NUMBERS AND A LIST OF THE INDIVIDUAL ACCEPTANCE CRITERIA, WHERE CALLED FOR, ON THE ORR ACCEPTANCE CRITERIA SUMMARY SHEET.**

**ATTACHMENT 2**

**ORR ACCEPTANCE CRITERIA SUMMARY SHEET  
FOR NON-HARDWARE BASIC ELEMENTS**

**PAGE 1 OF**

**REVIEWER NAME:**

**DATE:**

**ITEM #:**

**TITLE:**

**REACTOR:      K    L    P      RESTART PHASE:    1    or    2      (indicate one)**

**DESCRIPTION OF BASIC ELEMENT(S) AND NUMBER(S): (Restart Work Item  
Deliverables from ROMP Volumes 2, 3, & 4)**

**ACCEPTANCE CRITERIA: (list below and attach)**



ATTACHMENT 2

ACCEPTANCE CRITERIA FOR:

ITEM #:

TITLE:

PAGE OF

REVIEWER NAME:

DATE:

REACTOR:     K   L   P     RESTART PHASE:   1 or 2 (indicate one)

BASIC ELEMENT/GENERIC DESCRIPTION(S): (attach copy of Restart Work Item)

ACCEPTANCE CRITERIA:     (from attached instructions)



16 AUG 1990  
 9 54 AM '90  
 DWF SAFETY E

SECTION 1 - DESIGN BASIS

Volume 2

SECTION	NO.	TITLE	REV	DATE	PAGE	TARGET SCHEDULE DATE
DB	1.1	Operating Envelope/Linking Document	5	10/5/90	(1.1) 1	9 Nov 90
DB	1.2	Operating Envelope/Linking Document	5	10/5/90	(1.1) 3	Complete
DB	1.3	Shift Technical Support Training On Linking Document	5	10/5/90	(1.1) 5	24 Aug 90
DB	1.4	Technical Specification on Core Power Distribution	5	10/5/90	(1.1) 7	22 Aug 90
DB	1.5	Reactivity Control	5	10/5/90	(1.1) 11	17 Aug 9
DB	1.6	Seismic Resistance	5	10/5/90	(1.1) 13	2 Nov 90
DB	2.1	Seismically Qualified-Shutdown Systems (2 SSS)	5	10/5/90	(1.2) 1	13 Nov 90
DB	2.2	Automatic Actuation of SSS	5	10/5/90	(1.2) 5	12 Oct 90
DB	2.3	Seismically Qualified PW Loop	5	10/5/90	(1.2) 7	1 Oct 90
DB	2.4	Technical Specification on Leak Limits Detection	5	10/5/90	(1.2) 11	14 Sep 90
DB	2.5	Seismically Qualified-Primary Coolant Pump and Power Sources	5	10/5/90	(1.2) 13	28 Sep 90
DB	2.6	Seismically Qualified-Makeup System	5	10/5/90	(1.2) 17	13 Jul 90
DB	2.7	Seismically Qualified-Cooling Water System	5	10/5/90	(1.2) 21	5 Oct 90
DB	2.8	Seismically Qualified-Instruments and Monitoring	5	10/5/90	(1.2) 25	14 Oct 90
DB	2.9	Procedures/Training-Response To Seismic Event	5	10/5/90	(1.2) 29	31 Aug 90
DB	2.10	Seismically Qualified-Emergency Lighting	5	10/5/90	(1.2) 31	11 Sep 90
DB	2.11	Pre-Startup Seismic Engineer Walkdown	5	10/5/90	(1.2) 33	6 Nov 90
DB	2.12	DCs Not Flooded Out by ECS After DBE	5	10/5/90	(1.2) 35	30 Aug 90
DB	2.0A	Seismically Qualified-Central Control Room Ceiling	5	10/5/90	(1.2) 39	28 Sep 90
DB	2.0B	Seismically Qualified-Filter Chocks	5	10/5/90	(1.2) 41	14 Sep 90
DB	3.1	Startup Accident Analysis	5	10/5/90	(1.3) 1	20 Sep 90
DB	3.2	Technical Specification on Reactivity Control	5	10/5/90	(1.3) 3	7 Sep 90
DB	3.3	Reactivity Control Procedures	5	10/5/90	(1.3) 7	8 Aug 90
DB	3.4	Surveillance Procedures-Control Rod Latching	5	10/5/90	(1.3) 11	16 Jul 90
DB	3.5	Reactor Control Rod Position Indication	5	10/5/90	(1.3) 13	14 Sep 90
DB	4.1	Periodic Inspection for Combustibles	5	10/5/90	(1.4) 1	3 Oct 90
DB	4.2	Pre-Startup Certified Fire Control Engineer Walkdown	5	10/5/90	(1.4) 3	16 Oct 90
DB	4.3	Maintenance/Construction Fire Watch Procedures	5	10/5/90	(1.4) 5	24 Aug 90
DB	4.4	Fire Equipment Surveillance Procedures	5	10/5/90	(1.4) 7	29 Jun 90
DB	4.5	Fire Emergency Procedures	5	10/5/90	(1.4) 9	4 Sep 90
DB	4.6	Control of Introduction of Combustibles	5	10/5/90	(1.4) 11	17 Oct 90
DB	4.7	Combustible Scaffolding	5	10/5/90	(1.4) 13	30 Aug 90
DB	4.8	Review of Fire Detection and Suppression Equipment and Procedures	5	10/5/90	(1.4) 15	6 Nov 90
DB	4.9	Review of Fire Detection Capabilities	5	10/5/90	(1.4) 21	6 Nov 90
DB	4.10	Shutdown on Confirmed Fire Alarm	5	10/5/90	(1.4) 23	Complete
DB	5.1	NBB-1* FI (Flow Instability) Documentation	5	10/5/90	(1.5) 1	Complete
DB	5.2	Review and Approval of NBB-1*FI (Flow Instability) Methodology by DOE	5	10/5/90	(1.5) 3	Complete
DB	5.3	NBB-1* ECS (Emergency Cooling System) Documentation	5	10/5/90	(1.5) 5	Complete
DB	5.4	Review and Approval of NBB-1* ECS (Emergency Cooling System) by DOE	5	10/5/90	(1.5) 7	Complete
DB	5.5	Restart Power Limit Recommendation	5	10/5/90	(1.5) 9	15 Nov 90
DB	6.1	Baseline Walkdowns	5	10/5/90	(1.6) 1	1 Oct 90
DB	6.2	Baseline Walkdowns-DOE Review	5	10/5/90	(1.6) 5	Complete
DB	6.3	Conduct Material Condition Walkdowns	5	10/5/90	(1.6) 7	17 Aug 90
DB	6.4	Vessel Integrity Status	5	10/5/90	(1.6) 9	24 Sep 90
DB	6.5	Safety Discrepancies From Walkdowns	5	10/5/90	(1.6) 11	Complete

WESTINGHOUSE SAVANNAH RIVER COMPANY  
 REACTOR OPERATIONS MANAGEMENT PLAN  
 WSRC-RP-89-368, Volume 2

Section:  
 Page:  
 Effective Date:

Contents  
 1 of 11  
 10/5/90, Rev 5

SECTION 2 - HUMAN PERFORMANCE

Volume 2

<u>SECTION</u>	<u>NO.</u>	<u>TITLE</u>	<u>REV</u>	<u>DATE</u>	<u>PAGE</u>	<u>TARGET SCHEDULE DATE</u>
HP	1.1	Five Shift Personnel Assignments	5	10/5/90	(2.1) 1	Complete
HP	1.2	Fifth Shift Reactor Department Standing Instruction	5	10/5/90	(2.1) 3	Complete
HP	1.3	Minimum Staffing Criteria	5	10/5/90	(2.1) 5	Complete
HP	2.1	Degreed, STE Trained Supervisor Reactor Department Standing Instruction	5	10/5/90	(2.2) 1	Complete
HP	2.2	Engineering or Relevant Science 4-Year Degree	5	10/5/90	(2.2) 3	Complete
HP	2.3	Degreed Supervisor to Report to CCR for Scram or Off-Normal Events	5	10/5/90	(2.2) 5	Complete
HP	3.1	Technical Support Engineer Charter	5	10/5/90	(2.3) 1	Complete
HP	3.2	Technical Support Training	5	10/5/90	(2.3) 3	Complete
HP	3.3	Technical Expert List	5	10/5/90	(2.3) 5	Complete
HP	3.4	Technical Support Qualification Requirement	5	10/5/90	(2.3) 7	Complete
HP	3.5	Technical Support Minimum One Week Rotation	5	10/5/90	(2.3) 9	Complete
HP	4.1	Shift Advisor Qualifications	5	10/5/90	(2.4) 1	Complete
HP	4.2	Shift Advisor Charter	5	10/5/90	(2.4) 3	Complete
HP	4.3	Shift Advisor Training	5	10/5/90	(2.4) 5	Complete
HP	4.4	Shift Advisor Assignments	5	10/5/90	(2.4) 7	Complete
HP	5.1	Restart Training Plan	5	10/5/90	(2.5) 1	27 Sep 90
HP	5.2	Training by Qualified Instructors	5	10/5/90	(2.5) 3	29 Aug 90
HP	5.3	Written Training Objective/Lesson Plan	5	10/5/90	(2.5) 5	15 Jun 90
HP	5.4	Written Study Guides	5	10/5/90	(2.5) 7	24 Oct 90
HP	5.5	Written Examinations	5	10/5/90	(2.5) 9	16 Nov 90
HP	5.6	Peer Evaluation of Certified Personnel	5	10/5/90	(2.5) 11	9 Nov 90
HP	6.1	Instructor Training	5	10/5/90	(2.6) 1	Complete
HP	6.2	Technical Instructors	5	10/5/90	(2.6) 3	Complete
HP	6.3	Training Advisors	5	10/5/90	(2.6) 5	Complete
HP	7.1	Training - Depth of Technical Knowledge	5	10/5/90	(2.7) 1	24 Oct 90
HP	7.2	Training-Operations	5	10/5/90	(2.7) 17	24 Aug 90
HP	8.1	Training For Operations Support Personnel	5	10/5/90	(2.8) 1	Complete

SECTION 3 - MANAGEMENT SYSTEMS

Volume 2

<u>SECTION</u>	<u>NO.</u>	<u>TITLE</u>	<u>REV</u>	<u>DATE</u>	<u>PAGE</u>	<u>TARGET SCHEDULE DATE</u>
MS	1.1	Logkeeping - Reactor Department Standing Instruction	5	10/5/90	(3.1) 1	Complete
MS	1.2	K-Area Shift Training On Logkeeping	5	10/5/90	(3.1) 3	Complete
MS	1.3	Logkeeping Verification	5	10/5/90	(3.1) 5	Complete
MS	2.1	Tagging/Lockout Reactor Department Standing Instruction	5	10/5/90	(3.2) 1	Complete
MS	2.2	K-Area Shift Training on Tagging/Lockout	5	10/5/90	(3.2) 3	Complete
MS	2.3	Tagging/Lockout Verification	5	10/5/90	(3.2) 5	Complete
MS	3.1	Release/Return and Procedure Verification	5	10/5/90	(3.3) 1	Complete
MS	3.2	Written Procedure For All Maintenance/Construction Work	5	10/5/90	(3.3) 3	Complete
MS	3.3	Training On Procedural Requirement	5	10/5/90	(3.3) 5	Complete
MS	3.4	Verification of Compliance	5	10/5/90	(3.3) 7	Complete
MS	4.1	Communications Reactor Department Standing Instruction	5	10/5/90	(3.4) 1	Complete
MS	4.2	Communications Per DOE Order 5480.4 and 5000.3	5	10/5/90	(3.4) 3	Complete
MS	4.3	Communications Training	5	10/5/90	(3.4) 5	Complete
MS	4.4	Communications Verification	5	10/5/90	(3.4) 7	Complete
MS	4.5	24 Hour DOE Contact	5	10/5/90	(3.4) 9	Complete
MS	5.1	Procedure Review (Post-P Area Reactivity Event)	5	10/5/90	(3.5) 1	17 Sep 90
MS	5.2	Procedural Revision (Event Report Backlog)	5	10/5/90	(3.5) 3	22 Aug 90
MS	5.3	Review of Temporary Procedure Changes	5	10/5/90	(3.5) 5	10 Sep 90
MS	5.4	Procedure Walkdown Reviews	5	10/5/90	(3.5) 7	10 Aug 90
MS	6.1	Significant Safety Equipment List	5	10/5/90	(3.6) 1	11 Sep 90
MS	6.2	Safety Related Maintenance Procedures	5	10/5/90	(3.6) 3	4 Sep 90
MS	7.1	Shift Turnover Reactor Department Standing Instruction	5	10/5/90	(3.7) 1	Complete
MS	7.2	K-Area Training - Shift Turnover	5	10/5/90	(3.7) 3	Complete
MS	7.3	Shift Turnover Verification	5	10/5/90	(3.7) 5	Complete
MS	8.1	Up-To-Date DPSOL Schematics	5	10/5/90	(3.8) 1	5 Oct 90
MS	8.2	Independent Verification of Line-up Procedures	5	10/5/90	(3.8) 5	17 Aug 90
MS	9.1	DOE Approval On Test Authorizations Outside Technical Standards	5	10/5/90	(3.9) 1	Complete
MS	9.2	Test Procedures	5	10/5/90	(3.9) 3	Complete
MS	9.3	Test Authorization	5	10/5/90	(3.9) 5	Complete
MS	9.4	Formal Requirements for Testing	5	10/5/90	(3.9) 7	Complete
MS	10.1	Improved Reactor Housekeeping Program	5	10/5/90	(3.10) 1	6 Nov 90
MS	10.2	Review INPO 85-038 (Housekeeping)	5	10/5/90	(3.10) 3	12 Oct 90

SECTION 3 - MANAGEMENT SYSTEMS (CONT.)

Volume 2

SECTION	NO.	TITLE	REV	DATE	PAGE	TARGET SCHEDULE DATE
MS	10.3	Management Housekeeping Inspections	5	10/5/90	(3.10) 5	30 Oct 90
MS	10.4	Reactor Safety Advisory Committee Housekeeping Inspection	5	10/5/90	(3.10) 7	26 Oct 90
MS	11.1	Compliance With Health Protection Procedures	5	10/5/90	(3.11) 1	Complete
MS	11.2	Radiation Protection Responsibility	5	10/5/90	(3.11) 5	Complete
MS	11.3	Health Protection Compliance Verification	5	10/5/90	(3.11) 7	Complete
MS	12.1	Management Structure - Accountability	5	10/5/90	(3.12) 1	Complete
MS	12.2	Management Structure - Communications	5	10/5/90	(3.12) 3	Complete
MS	12.3	Management Structure - On-Site Presence	5	10/5/90	(3.12) 5	Complete
MS	13.1	Management Involvement	5	10/5/90	(3.13) 1	Complete
MS	14.1	Procedures At Job Site	5	10/5/90	(3.14) 1	Complete
MS	14.2	Procedure Compliance	5	10/5/90	(3.14) 3	Complete
MS	14.3	Training On Procedure Use	5	10/5/90	(3.14) 5	Complete
MS	14.4	Procedure Use Verification	5	10/5/90	(3.14) 7	Complete
MS	15.1	Categorize Backlog Items	5	10/5/90	(3.15) 1	26 Sep 90
MS	16.1	Records Management	5	10/5/90	(3.16) 1	Complete
MS	17.1	Post-Trip Assessment	5	10/5/90	(3.17) 1	Complete
MS	18.1	DOE Approval of Linking Document	5	10/5/90	(3.18) 1	Complete
MS	19.1	USQ - NSCP Revision	5	10/5/90	(3.19) 1	Complete
MS	19.2	Issue NSCP - Required Reading	5	10/5/90	(3.19) 3	Complete
MS	20.1	Communications (Technical) Procedures	5	10/5/90	(3.20) 1	Complete
MS	20.2	Issue Communications (Technical) Procedure	5	10/5/90	(3.20) 3	Complete
MS	21.1	Design Change Approval	5	10/5/90	(3.21) 1	Complete
MS	22.1	Design Basis Testing/Data Control	5	10/5/90	(3.22) 1	Complete
MS	23.1A	Issue Management System	5	10/5/90	(3.23) 1	Complete
MS	23.1B	Reactor Safety Improvement Program	5	10/5/90	(3.23) 3	Complete
MS	24.1	Restart/Power Ascension Program	5	10/5/90	(3.24) 1	3 Oct 90
MS	24.2	DOE Approval of Restart/Power Ascension Plan	5	10/5/90	(3.24) 7	31 Aug 90
MS	25.1	RSES Staffing - Area Engineer	5	10/5/90	(3.25) 1	17 Oct 90
MS	25.2	RSES Charter	5	10/5/90	(3.25) 3	1 Aug 90
MS	25.3	RSES Readiness Evaluation Plan	5	10/5/90	(3.25) 5	1 Nov 90
MS	25.4	Decision Process for Items Outside SAR	5	10/5/90	(3.25) 7	Complete
MS	25.5	RSES Standardized Distribution	5	10/5/90	(3.25) 9	15 May 90
MS	26.1	RSAC Charter - Increased Involvement	5	10/5/90	(3.26) 1	16 Aug 90
MS	26.2	RSAC Subcommittee For Restart Review	5	10/5/90	(3.26) 3	9 Aug 90
MS	26.3	RSES Staffing - RSAC Support	5	10/5/90	(3.26) 5	9 Aug 90
MS	27.1	INPO Assistance	5	10/5/90	(3.27) 1	Complete
MS	28.1	Integrating SRP Operating History	5	10/5/90	(3.28) 1	Complete
MS	29.1	Operating Experience Review Program	5	10/5/90	(3.29) 1	Complete

SECTION 4 - WESTINGHOUSE INDEPENDENT SAFETY REVIEW COMMITTEE

Volume 2

SECTION	NO.	TITLE	REV	DATE	PAGE	TARGET SCHEDULE DATE
WISRC	1	ECS Actuation Following LOPA	5	10/5/90	(4.1) 1	14 Aug 90
WISRC	2	ECS Actuation Procedures	5	10/5/90	(4.2) 1	Complete
WISRC	4	LOCA Performance Testing	5	10/5/90	(4.4) 1	Complete
WISRC	5	Moderator Recovery System	5	10/5/90	(4.5) 1	Complete
WISRC	6	Pump Degradation	5	10/5/90	(4.6) 1	15 Oct 90
WISRC	7	Sump Water Removal Capability	5	10/5/90	(4.7) 1	11 Sep 90
WISRC	8	Valve Inspection	5	10/5/90	(4.8) 1	31 Aug 90
WISRC	18	Batteries and UPS	5	10/5/90	(4.18) 1	12 Oct 90
WISRC	19	Essential Core Monitoring	5	10/5/90	(4.19) 1	2 Jul 90
WISRC	21	Spurious Controls Operation	5	10/5/90	(4.21) 1	Complete
WISRC	23	Core Evaluation Responsibility	5	10/5/90	(4.23) 1	Complete
WISRC	24	Fuel/Target Manufacturing	5	10/5/90	(4.24) 1	Complete
WISRC	26	Safety Margin Evaluation	5	10/5/90	(4.26) 1	NA
WISRC	27	Start-Up Core Testing	5	10/5/90	(4.27) 1	NA
WISRC	29	Control Room Information	5	10/5/90	(4.29) 1	28 Sep 90
WISRC	31	Operational Assessment	5	10/5/90	(4.31) 1	Complete
WISRC	33	Plant Site Organization	5	10/5/90	(4.33) 1	Complete
WISRC	35	Building Exhaust Fan Design Review	5	10/5/90	(4.35) 1	20 Sep 90
WISRC	37	Improved Training Procedures	5	10/5/90	(4.37) 1	27 Sep 90
WISRC	38	LOPA Event Frequency	5	10/5/90	(4.38) 1	11 Sep 90
WISRC	39	Procedural Guidance	5	10/5/90	(4.39) 1	Complete
WISRC	45	Partial Length Rod Drop	5	10/5/90	(4.45) 1	Complete
WISRC	47	Basis For Power Level	5	10/5/90	(4.47) 1	NA
WISRC	49	Assimilation of Massive Change	5	10/5/90	(4.49) 1	21 Sep 90

SECTION 5 - OUTAGE WORK

Volume 2

SECTION	NO.	TITLE	REV	DATE	PAGE	TARGET SCHEDULE DATE
OW	1	Corrective Maintenance (CM)	5	10/5/90	(5.1) 1	15 Jun 90
OW	2	Preventive Maintenance (PM)	5	10/5/90	(5.2) 1	27 Jun 90
OW	3	Operational Readiness Review	5	10/5/90	(5.3) 1	8 Dec 90
OW	4	Comprehensive Reactor System Performance Verification	5	10/5/90	(5.4) 1	NA--
OW	6	Environmental Impact Statement	5	10/5/90	(5.6) 1	Pending
OW	7	K-Reacto Cooling Tower Project	5	10/5/90	(5.7) 1	Pending
OW	8	Security Upgrades	5	10/5/90	(5.8) 1	Pending
OW	9	Replace Process Water Expansion Joints in Hx Discharge Lines	5	10/5/90	(5.9) 1	7 May 90
OW	12	Annunciation of Negative Pulse and Relay	5	10/5/90	(5.12) 1	24 Aug 90
OW	13	Atomic Absorption Spectrometer	5	10/5/90	(5.13) 1	16 Oct 90
OW	14	High Level Flux Monitor - Bypassed Circuit Operability	5	10/5/90	(5.14) 1	6 Jul 90
OW	15	190 Building Pump Suction Well Sluice Gates Inspection	5	10/5/90	(5.15) 1	13 Jun 90
OW	16	Startup Test Program	5	10/5/90	(5.16) 1	8 Feb 91



SECTION 6 - QUALITY ASSURANCE

Volume 2

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QA	1.1	Organization	5	10/5/90	(6.1) 1	6 Sep 90
QA	1.2	Organization	5	10/5/90	(6.1) 3	1 Aug 90
QA	1.3	Organization	5	10/5/90	(6.1) 5	30 Jul 90
QA	2.1	Quality Assurance Program	5	10/5/90	(6.2) 1	Complete
QA	2.2	Quality Assurance Program	5	10/5/90	(6.2) 3	Complete
QA	2.3	Quality Assurance Program	5	10/5/90	(6.2) 5	Complete
QA	2.4	Quality Assurance Program	5	10/5/90	(6.2) 9	Complete
QA	3.1	Design Control	5	10/5/90	(6.3) 1	Complete
QA	4.1	Procurement Document Control	5	10/5/90	(6.4) 1	Complete
QA	4.2	Procurement Document Control	5	10/5/90	(6.4) 3	Complete
QA	4.3	Procurement Document Control	5	10/5/90	(6.4) 5	Complete
QA	5.1	Instructions, Procedures, and Drawings	5	10/5/90	(6.5) 1	12 Sep 90
QA	5.2	Instructions, Procedures, and Drawings	5	10/5/90	(6.5) 3	15 Aug 90
QA	6.1	Document Control	5	10/5/90	(6.6) 1	31 Aug 90
QA	6.2	Document Control	5	10/5/90	(6.6) 3	1 Aug 90
QA	7.1	Control of Purchased Items and Services	5	10/5/90	(6.7) 1	29 Aug 90
QA	8.1	Identification & Control Of Items	5	10/5/90	(6.8) 1	13 Sep 90
QA	8.2	Identification & Control Of Items	5	10/5/90	(6.8) 3	16 Aug 90
QA	8.3	Identification & Control Of Items	5	10/5/90	(6.8) 5	Complete
QA	8.4	Identification & Control Of Items	5	10/5/90	(6.8) 7	30 Jul 90
QA	9.1	Control Of Special Processes	5	10/5/90	(6.9) 1	16 Jul 90
QA	9.2	Control Of Special Processes	5	10/5/90	(6.9) 3	27 Jul 90
QA	9.3	Control Of Special Processes	5	10/5/90	(6.9) 5	1 Aug 90
QA	9.4	Control Of Special Processes	5	10/5/90	(6.9) 7	3 Aug 90
QA	9.5	Control Of Special Processes	5	10/5/90	(6.9) 9	3 Aug 90
QA	10.1	Inspection	5	10/5/90	(6.10) 1	17 Jul 90
QA	11.1	Test Control	5	10/5/90	(6.11) 1	12 Sep 90
QA	11.2	Test Control	5	10/5/90	(6.11) 3	1 Aug 90
QA	12.1	Control Of Measuring And Test Equipment	5	10/5/90	(6.12) 1	26 Oct 90
QA	12.2	Control Of Measuring And Test Equipment	5	10/5/90	(6.12) 3	23 Aug 90
QA	13.1	Handling Storage And Shipping	5	10/5/90	(6.13) 1	31 Aug 90
QA	13.2	Handling Storage And Shipping	5	10/5/90	(6.13) 3	3 Aug 90
QA	14.1	Inspection, Test, And Operating Status	5	10/5/90	(6.14) 1	31 Aug 90
QA	14.2	Inspection, Test, And Operating Status	5	10/5/90	(6.14) 3	3 Aug 90
QA	15.1	Control Of Nonconforming Items	5	10/5/90	(6.15) 1	18 Sep 90
QA	16.1	Corrective Actions	5	10/5/90	(6.16) 1	21 Aug 90
QA	17.1	Records Management	5	10/5/90	(6.17) 1	23 Aug 90
QA	18.1	Audits And Surveillances	5	10/5/90	(6.18) 1	17 Aug 90
QA	18.2	Audits And Surveillances	5	10/5/90	(6.18) 3	Complete
QA	18.3	Audits And Surveillances	5	10/5/90	(6.18) 3	4 Mar 91
QA	19.1	Software Quality Assurance	5	10/5/90	(6.19) 1	6 Sep 90

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SECTION 7 - DOE ADDED WORK SCOPE

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SECTION	NO.	TITLE	REV	DATE	PAGE	TARGET SCHEDULE DATE
D0	02	Tech Spec Interim Programs	5	10/5/90	(7.2) 1	5 Oct 90
D0	10	Seismic Topical Reports for K Reactor	5	10/5/90	(7.10) 1	1 Aug 90
D0	16	Expanded Critique System	5	10/5/90	(7.16) 1	Not Req'd
D0	21	QA Manual Rev. 11	5	10/5/90	(7.21) 1	3 Oct 90
D0	31	Secondary Cooling Water Pipe Replacement	5	10/5/90	(7.31) 1	15 Jun 90
D0	35	General Employee Training (GET) Plant Access Control Procedure	5	10/5/90	(7.35) 1	21 Nov 90
D0	40	Equipment Labeling Program	5	10/5/90	(7.40) 1	Pending
D0	42	Radiation Worker Training	5	10/5/90	(7.42) 1	Pending
D0	44	Issue RRD Administrative Manual RD-1	5	10/5/90	(7.44) 1	14 Jun 90
D0	45	Controls on Use of Mercury Wetted Relays	5	10/5/90	(7.45) 1	9 Sep 90
D0	47	Training for 190 Building Operations	5	10/5/90	(7.47) 1	22 Jun 90
D0	48	(See MS 15.1)				
D0	52	Pipe Interference Concern	5	10/5/90	(7.52) 1	20 Jul 90
D0	53	Adequacy of Compressed Air System Schedules	5	10/5/90	(7.53) 1	31 Aug 90
D0	54	50 Million Gallon Retention Basin Liner	5	10/5/90	(7.54) 1	2 Nov 90
D0	55	Compressed Air Systems Upgrade Building 105	5	10/5/90	(7.55) 1	29 Oct 90
D0	56	PWS Heat Exchanger Seismic Bracing	5	10/5/90	(7.56) 1	Pending
D0	57	Seismic Issues - Soil Investigations "K" Reactor	5	10/5/90	(7.57) 1	Pending
D0	58	DBE Assessment	5	10/5/90	(7.58) 1	Pending
D0	59	Seismic Issues Pen Branch Fault	5	10/5/90	(7.59) 1	Pending
D0	60	Seismic Issues - CWS Structures Analysis	5	10/5/90	(7.60) 1	Pending
D0	61	AACS Seismic Upgrade	5	10/5/90	(7.61) 1	Pending
D0	62	Redundant IFC Monitoring	5	10/5/90	(7.62) 1	Pending
D0	63	Seismic Issues - Grouted Pipe Supports	5	10/5/90	(7.63) 1	Pending
D0	64	AACS Seismic Modifications	5	10/5/90	(7.64) 1	Pending

SECTION 8 - ISSUE MANAGEMENT ADDED WORK SCOPE

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SECTION	NO.	SCN_NO.	TITLE	REV.	DATE	PAGE	TARGET SCHEDULE DATE
IM	008	156	Common Mode Failure of Motor Operated Valves	5	10/5/90	(8.8) 1	25 Sep 90
IM	026	155	ECS Check Valve Inspection and Testing Program	5	10/5/90	(8.26) 1	2 Nov 90
IM	036	103	Environmental Qualification	5	10/5/90	(8.36) 1	28 Sep 90
IM	040	100	Cooling Water Recirculation Pump Diesel Generator 24V DC Starting and Control Batteries	5	10/5/90	(8.40) 1	11 Sep 90
IM	074	075	Setpoint Calculations and Analysis Review for Safety Related Setpoints	5	10/5/90	(8.74) 1	16 Oct 90
IM	085	081	Hydrogen Control Measures and Effects of Hydrogen Burns on Safety Equipment	5	10/5/90	(8.85) 1	Complete
IM	087	084	Physical Examinations for Reactor Certified Personnel	5	10/5/90	(8.87) 1	NA
IM	139	167	Gas Plenum Overpressurization	5	10/5/90	(8.139) 1	30 May 90
IM	147	088	Review of Scram Circuit	5	10/5/90	(8.147) 1	28 Sep 90
IM	168	220	115 KV Transient Stability Study	5	10/5/90	(8.168) 1	28 Sep 90
IM	169	118	Reliability of the Reactor Shutdown System	5	10/5/90	(8.169) 1	Pending
IM	172	105	Unwanted Rod Motion	5	10/5/90	(8.172) 1	17 Aug 90
IM	187	218	Emergency Cooling System Performance Evaluation	5	10/5/90	(8.187) 1	3 Oct 90
IM	197	227	Demand for Process Water System DC Motors During LOCA	5	10/5/90	(8.197) 1	14 Nov 90
IM	233	129	Isothermal Box Moisture Proofing	5	10/5/90	(8.233) 1	25 Sep 90
IM	238	161	Review and Revise ECS Polybor Header Testing	5	10/5/90	(8.238) 1	Pending
IM	265	159	Modify Cooling Water Recirculation Pump Discharge Check Valve	5	10/5/90	(8.265) 1	15 June 90
IM	299R	212	Containment Substation AK Breaker Overcurrent Relay Setting and Trip Setpoint Revision	5	10/5/90	(8.299) 1	22 Jun 90
IM	480	213	Improper Welder Qualification Process	5	10/5/90	(8.480) 1	Complete
IM	503	180	Cooling Water Effluent Building Inspection	5	10/5/90	(8.503) 1	10 Jun 90
IM	505	160	Reactivity Spikes from Control Rod Response to Seismic Events	5	10/5/90	(8.505) 1	24 Aug 90
IM	506	225	ECS Pump Starter Optimization	5	10/5/90	(8.506) 1	Pending
IM	546	164	Open PHR Confinement Items	5	10/5/90	(8.546) 1	22 Feb 91
IM	557	169	Replace the Hot-Wire Anemometer System in the Ventilation System	5	10/5/90	(8.557) 1	25 May 90
IM	564	170	New Scram Response Time Measurements	5	10/5/90	(8.564) 1	15 Oct 90
IM	568	171	Install Chain Operators on Valves	5	10/5/90	(8.568) 1	13 Jul 90
IM	579	217	Reactor Battery Testing and Compliance	5	10/5/90	(8.579) 1	12 Oct 90
IM	588	166	Sump Pump Bearing Cooling on Non-Submersible Pump at -40	5	10/5/90	(8.588) 1	15 Nov 90
IM	611	226	Evaluate Process Room Floor Drain Pipe	5	10/5/90	(8.611) 1	11 May 90
IM	619	173	Reactor Average Assessment	5	10/5/90	(8.619) 1	5 Oct 90
IM	624	229	Sump Water Diversion Valves	5	10/5/90	(8.624) 1	25 May 90

SECTION 8 - ISSUE MANAGEMENT ADDED WORK SCOPE (CONT.)

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SECTION	NO.	SCN NO.	TITLE	REV.	DATE	PAGE	TARGET SCHEDULE DATE
IM	632	242	Deformation of Expansion Joints - ECS	5	10/5/90	(8.632) 1	17 Oct 90
IM	669	223	Safety Related Water Supply	5	10/5/90	(8.669) 1	Pending
IM	696	174	Missile Protection	5	10/5/90	(8.696) 1	Complete
IM	697	256	Wind and Tornado Loading	5	10/5/90	(8.697) 1	17 Sep 90
IM	703	240	Operation of Influent and Effluent Dampers for Confinement				
			Building Exhaust Filters	5	10/5/90	(8.703) 1	20 Jul 90
IM	723	189	Inspection and Integrity Analysis of Bldg 106	5	10/5/90	(8.723) 1	7 Sep 90
IM	731	186	Cable Testing and Replacement	5	10/5/90	(8.731) 1	1 Oct 90
IM	756	191	Missing Negative Pulse Battery Fuse	5	10/5/90	(8.756) 1	17 Aug 90
IM	757	192	Placement of Diesel Engine - Generator Sets on Containment Operation	5	10/5/90	(8.757) 1	5 Sep 90
IM	764	188	Improve ECS Sodium Borate Strainer System	5	10/5/90	(8.764) 1	20 Jun 90
IM	779	184	PWDG Diesel Fuel Sampling	5	10/5/90	(8.779) 1	5 Oct 90
IM	780	214	CWS Fracture Mechanics	5	10/5/90	(8.780) 1	22 Aug 90
IM	822	190	Pump Room Sump Pump Bearing Lubrication	5	10/5/90	(8.822) 1	20 Jun 90
IM	829R	193	Roll Door Modification, -40 Level 105 K & P	5	10/5/90	(8.829) 1	25 Sep 90
IM	839	221	WRS - System Level Testing	5	10/5/90	(8.839) 1	Pending
IM	840	196	Purchase Replacement Septifoil Valves	5	10/5/90	(8.840) 1	8 Oct 90
IM	843	238	Defective Electrical Components	5	10/5/90	(8.843) 1	5 Oct 90
IM	844	237	Defective Instrumentation and Control Components	5	10/5/90	(8.844) 1	12 Oct 90
IM	847	239	Defective Mechanical Components	5	10/5/90	(8.847) 1	18 Oct 90
IM	849	198	Update As-Built Drawings for Reactor Projects	5	10/5/90	(8.849) 1	5 Sep 90
IM	863	232	Correct Reactor Building Shield Door Deficiency	5	10/5/90	(8.863) 1	20 Sep 90
IM	867	216	Upgrade of Rod Equipment Room Power Supplies	5	10/5/90	(8.867) 1	19 Oct 90
IM	886	233	Building Exhaust Fan Diesel Generator Modifications	5	10/5/90	(8.886) 1	18 Oct 90
IM	902	289	Heat Exchanger Bay Door Locks	5	10/5/90	(8.902) 1	28 Aug 90

## SECTION 9 - SER ADDED WORK SCOPE

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SE	2.2	Contractor Management and Safety Culture	5	10/5/90	(9.2) 1	19 Oct 90
SE	2.3	Issues Management and Resolution	5	10/5/90	(9.2) 3	22 Aug 90
SE	2.5	Contractor Compliance with DOE Orders	5	10/5/90	(9.2) 5	1 Oct 90
SE	3.0	Quality Assurance	5	10/5/90	(9.3) 1	13 Aug 90
SE	5.1	Safety Analysis Report (SAR)	5	10/5/90	(9.5) 1	15 Nov 90
SE	5.2	Unreviewed Safety Question (USQs)	5	10/5/90	(9.5) 17	15 Oct 90
SE	5.3A	Technical Baseline Program	5	10/5/90	(9.5) 19	18 Oct 90
SE	5.4	Design Change Process	5	10/5/90	(9.5) 21	25 Oct 90
SE	5.5	Drawing and Document Control	5	10/5/90	(9.5) 25	19 Nov 90
SE	5.5B	Drawing and Document Control	5	10/5/90	(9.5) 27	Pending
SE	5.6	Safety Related Equipment List	5	10/5/90	(9.5) 29	2 Oct 90
SE	5.7	Risk Reliability Analysis	5	10/5/90	(9.5) 31	Pending
SE	5.8	Verification of Computer Codes	5	10/5/90	(9.5) 33	28 Sep 90
SE	6.3A	Electrical Power System	5	10/5/90	(9.6) 1	Pending
SE	6.3B	Environmental Qualification	5	10/5/90	(9.6) 5	Pending
SE	6.4	Airborne Activity Confinement System (AACs)	5	10/5/90	(9.6) 7	5 Oct 90
SE	6.5	Safe Shutdown	5	10/5/90	(9.6) 9	7 Sep 90
SE	6.6	Sump Water Removal	5	10/5/90	(9.6) 11	14 Sep 90
SE	6.7A	Systems Integrity	5	10/5/90	(9.6) 13	15 Oct 90
SE	6.7B	Systems Integrity	5	10/5/90	(9.6) 15	Not Req'd
SE	6.7C	Systems Integrity	5	10/5/90	(9.6) 17	Pending
SE	6.7D	Systems Integrity	5	10/5/90	(9.6) 19	Pending
SE	6.7E	Systems Integrity	5	10/5/90	(9.6) 21	Pending
SE	6.7F	Systems Integrity	5	10/5/90	(9.6) 23	Pending
SE	6.7G	Systems Integrity	5	10/5/90	(9.6) 25	Pending
SE	7.2	Fire Protection Safe Shutdown Analysis	5	10/5/90	(9.7) 1	25 Sep 90
SE	7.3	Abnormal Condition Control Procedures	5	10/5/90	(9.7) 3	3 Oct 90
SE	7.4	Life Safety Upgrades	5	10/5/90	(9.7) 5	10 Aug 90
SE	7.5	Auxiliary Fire Brigades	5	10/5/90	(9.7) 7	5 Oct 90
SE	7.6	Reactor Area Procedures	5	10/5/90	(9.7) 9	21 Sep 90
SE	7.7	Training Programs	5	10/5/90	(9.7) 11	7 Sep 90
SE	7.8	Control of Introduction of Combustibles	5	10/5/90	(9.7) 13	NA
SE	7.9	Pre-Startup Certified Fire Protection Engineer Walkdown	5	10/5/90	(9.7) 15	Pending
SE	8.1	Control of Testing	5	10/5/90	(9.8) 1	1 Jun 90
SE	8.3A	Power Ascension Testing	5	10/5/90	(9.8) 3	Pending
SE	8.3B	Power Ascension Testing	5	10/5/90	(9.8) 5	Pending
SE	8.3C	Power Ascension Testing	5	10/5/90	(9.8) 7	Pending
SE	8.3D	Power Ascension Testing	5	10/5/90	(9.8) 9	Pending
SE	8.3E	Power Ascension Testing	5	10/5/90	(9.8) 11	Pending
SE	9.1	Operational Safety Review Process	5	10/5/90	(9.9) 1	Complete
SE	10.1	Staffing and Qualifications	5	10/5/90	(9.10) 1	Pending
SE	10.3	Normal/Abnormal Operating Procedures	5	10/5/90	(9.10) 3	1 Nov 90
SE	10.4	Emergency Operating Guidelines and Procedures	5	10/5/90	(9.10) 5	Pending
SE	10.7	Operator Shift Turnover Checklist	5	10/5/90	(9.10) 9	20 Jul 90
SE	10.11	Control of Equipment and Systems	5	10/5/90	(9.10) 11	Complete
SE	10.13	Fitness-For-Duty	5	10/5/90	(9.10) 13	Pending
SE	11.1	Transient and Accident Analysis	5	10/5/90	(9.11) 1	Not Req'd
SE	12.0	Engineering and Technical Support	5	10/5/90	(9.12) 1	31 Aug 90
SE	13.0	Maintenance	5	10/5/90	(9.13) 1	31 Aug 90
SE	14.0	Inspection and Testing	5	10/5/90	(9.14) 1	Pending
SE	15.0	Emergency Preparedness	5	10/5/90	(9.15) 1	21 Dec 90

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REACTOR RESTART DIVISION  
ADMINISTRATIVE MANUAL

MANUAL: R8.1  
PROCEDURE NO: RP 8.1283  
REVISION: 0  
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EFFECTIVE: 2/15/91  
CATEGORY: 3

**DR**

**CONTROL OF RESTART QA CLOSURE PACKAGES**

RECEIVED  
Aug 19 9 54 AM '91  
DNF SAFETY OFFICE

Approved By:

\_\_\_\_\_  
Manager, Reactor Quality Assurance

REVISION LOG

Revision Number	Effective Date	Description	Pages
0	2/15/91	Initial Issue	All



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**CONTROL OF RESTART QA  
CLOSURE PACKAGES**

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**1.0 PURPOSE:**

The purpose of this instruction is to provide direction and define the responsibilities for control of documentation and preparation of the closure packages for the "Reactor Operations Management Plan (ROMP)" QA Restart Work Items.

**2.0 SCOPE:**

This instruction implements the process for the development and organization of closure files for Restart Quality Assurance (RQA) Work Items related to the Quality Assurance acceptance criteria within the scope of the "Reactor Operations Management Plan" WSRC-RP-89-368. It includes the following activities:

- A) Closure Package Identification
- B) Makeup of Closure Package Documentation
- C) Closure Package Review and Approval
- D) Reopening of Completed Closure Packages

**3.0 RESPONSIBILITIES:**

Responsibilities for the following personnel are included in this procedure:

- 3.1 RQA Closure Coordinator
- 3.2 RQA Record Clerk
- 3.3 RQA Managers
- 3.4 Reactor Restart Verification (RRV) Personnel
- 3.5 Restart Quality Assurance Lead Personnel

**4.0 PROCEDURE:**

**4.1 Closure Package Identification.**

**4.1.1 Restart QA Personnel**

Developed a closure package for each QA Restart acceptance criteria (ie. QA-1, QA-2) to provide objective evidence that Restart Work Items have been completed. Complete the following actions prior to package closure:

- A. Restart Work Item deliverables will be reviewed by Restart QA personnel to ensure supporting documentation is complete and accessible.
- B. Restart QA personnel will include in the package, documents required to support closure of Restart Items. All closure packages will be forwarded to the Restart QA Closure Coordinator.

## 4.2 Makeup of Closure Package Documentation

### 4.2.1 RQA Closure Coordinator

Organize the closure package using the following format.

- A. The closure package will contain a File Index indicating the ROMP Restart Work Item number. This page will clearly state the item covered and any unique identity. This page will also include a statement indicating the elements of NQA-1, 1986, that were covered by the Restart QA Work Item. This statement will be based on the NQA-1 comparison matrix ( Attachment B).
- B. A Package Index will be included to identify the document sections contained in the closure package with the unique identification of individual documents and the revision number, if applicable.
- C. In accordance with the Package Index, each section shall include the final approved documents and closure approvals as required.
- D. The sections shall be in order of as indicated on the Package Index with the supporting documentation uniquely identified by document number and listed separately.
- E. The following is a list of required documents to be included in the closure package: File Index, Package Index, ROMP Work Item Deliverables, Supporting Documentation and RRV/RQA Final Issue Surveillance.

## 4.3 Closure Package Review and Approval

### 4.3.1 RQA Closure Coordinator

Performs a detailed review of the entire closure package for completeness and submit to the RQA Manager for final review and concurrence of the closure action. This review shall consist of the following:

- A. Satisfaction of Restart Work Item Criteria
- B. Completion of Closure Package Documentation
- C. Potential Scope/Schedule Change Notice items that are beyond scope of Restart Work Item.

#### 4.3.2 RQA Manager

Performs the WSRC Management Review and signs File Index to close action on the closure package. The package will be returned to the RQA Closure Coordinator for any additions or corrections. If closure package is complete, DOE will be notified of package completion for their review and close out. After DOE review and Acceptance, the package will be given to the Restart QA Record Clerk for inclusion into the Restart QA Document Control system.

#### 4.4 Reopening of Completed Closure Package

A formal request by RQA Management will be required to re-open previously complete closure packages. The RQA Closure Coordinator will set up an addenda Closure Package using the same identification and adding a revision number to denote reopening of the Closure Package. The RQA Closure Coordinator will follow the same sequence as specified in paragraph 4.1-4.4.

#### 5.0 RECORDS:

##### 5.1 QA Records

The following Quality Assurance Records are generated by this procedure and disposed of in accordance with RQA&A Records Retention Schedules.

##### *RQA CLOSURE PACKAGE*

##### 5.2 Non-QA Records

No Non-QA Records are created by this procedures.

#### 6.0 REFERENCES:

##### 6.1 Requirements Documents

*RP 8.1281, DOCUMENT CONTROL*

*RP 8.1282, CONTROL OF RQA RECORDS*

*WSRC-RP-89-368, REACTOR OPERATIONS MANAGEMENT PLAN (ROMP)*

##### 6.2 Interfacing Documents

None

#### 7.0 DEFINITIONS

NONE

**8.0 ATTACHMENTS:**

*Attachment A :*      *ROMP RESTART WORK ITEM FILE INDEX*

*Attachment B:*      *NQA-1 COMPARISON MATRIX*

ATTACHMENT A

ROMP RESTART WORK ITEM \_\_\_\_\_  
FILE INDEX

ITEM	TITLE
	File Index
I	Package/File Index
II	ROMP Item (Description)
III	Deliverable(Listed in order by Deliverable) number and then by the document/numbers representing that Deliverable)
IV	RRV Closure Surveillance
V	DOE Closure

NOTE: This ROMP Restart Work Item implements, and is in compliance with, elements of the following requirements of NQA-1, 1986, which are applicable to the Work Item Scope:

- Basic Requirement \_\_
- Supplement \_\_

File Completion Signatures:

\_\_\_\_\_  
Responsible RQA /Date  
Lead

\_\_\_\_\_  
RQA Closure/Date  
Coordinator

\_\_\_\_\_  
RQA Manager/Date

ATTACHMENT B

NQA-1 MATRIX

QA-1 ORGANIZATION

NQA-1

- |  |   |
|--|---|
| <p><b>QA-1.1</b> Reactors lines of responsibility, accountability and authority will be clearly defined</p> <p>Intent: This item was written to ensure that prior to restart RRD had clearly defined lines of organizational responsibility. This was put as a restart item based on the reorganizations that had taken place concurrent with transition.</p>  | <p>Basic Requirement 1<br/>Supplement 1S1-1<br/>Paragraphs 2.1.2.2<br/>and 3.1<br/>Append. 1A-1</p> |
| <p><b>QA-1.2</b> Reactors external interfaces (SRL, EPD, ESH &amp; QA, DOE-SR, etc.) and their responsibilities relative to restart will be clearly defined.</p> <p>Intent: Based on the reorganizations that took place with transition, this item was made a requirement before restart to ensure interface responsibilities between WSRC organizations which provide services to RRD were defined such that each organization fully understood their responsibilities relative to the safe restart of SRS reactors.</p> | <p>Paragraphs 3.2.1<br/>and 3.2.2</p>   |
| <p><b>QA-1.3</b> Job positions critical to restart will be identified and functional job descriptions developed or revised as necessary.</p> <p>Intent: This item was made a requirement before restart to ensure positions descriptions were prepared for those jobs which were critical to reactor restart. This item was written prior to the WSRC plan to have job descriptions prepared for all exempt and professional positions. The original requirement was focused on RRD positions.</p>                         | <p>Paragraphs 2.1.2.2<br/>Appen. 1A-1</p>   |

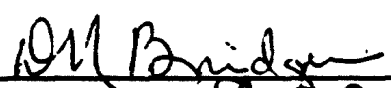
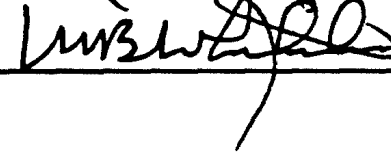
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U.S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER RESTART SPECIAL PROJECTS OFFICE  
ADMINISTRATIVE INSTRUCTION

TITLE: REACTOR RESTART PROGRAM MANAGEMENT PLAN

APPROVED:   
Director, Savannah River Restart  
Special Projects Office

DATE: 9/9/90

Reviewed by:   
Author: 

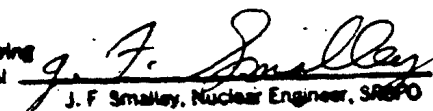
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Date: 12 Sep 90

EFFECTIVE PAGES: 1 - 22

RESPONSIBLE DIVISION OR OFFICE: Technical Support Division

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NUCLEAR INFORMATION

Revising  
Official   
J. F. Smalley, Nuclear Engineer, SRPO  
Date: 9-24-90

**Revision Log**

<b>Revision Level</b>	<b>Pages Affected</b>	<b>Description of Revision</b>
<b>0</b>	<b>All</b>	<b>Initial issue.</b>
<b>1</b>	<b>1</b>	<b>New cover sheet to record approval of Rev. 1</b>
<b>1</b>	<b>2</b>	<b>Added descriptions of Rev. 1 changes.</b>
<b>1</b>	<b>10, 11</b>	<b>Enhance discussion of documentation and closure of program reviews.</b>



**REACTOR RESTART PROGRAM MANAGEMENT PLAN****EXECUTIVE SUMMARY**

To facilitate a safe and timely restart of the U.S. Department of Energy (DOE) production reactors at the Savannah River Site (SRS), the Secretary of Energy, via SEN-6-89, established the Savannah River Restart Special Projects Office (SRSPPO) effective May 19, 1989. The Director, SRSPPO, reports to the Assistant Secretary for Defense Programs (ASDP) and interfaces primarily with the Manager, Savannah River (SR); the Deputy Assistant Secretary for Nuclear Material Production; Deputy Director, Savannah River Restart Office (SRRO); the President of Westinghouse Savannah River Company (WSRC); and their staffs. SRSPPO is tasked to direct the contractor's efforts on matters directly related to the managerial, technical, operational (including training), and scheduling aspects of the safe restart of K, L and P reactors and to keep the ASDP currently and fully informed on all matters which are affecting or could affect restart. This Reactor Restart Program Management Plan presents a basic outline of the efforts to be performed by SRSPPO, in conjunction with those of SRRO at Department of Energy Headquarters (DOE-HQ), to accomplish these tasks, and sets forth the components of a comprehensive, in-depth process designed to provide for a safe return to operation of the SRS production reactors. This process involves the identification, evaluation and resolution of safety concerns, which if not addressed could potentially lead to unacceptable risk to the health of the public or site personnel or damage to the environment. As part of the overall process, the facilities, their operators and DOE and the contractor's management will be evaluated against a set of criteria which specifies those requirements that must be acceptably addressed prior to resumption of operations in order to assure safe reactor operation management.

**CONTROLLED COPY****PURPOSE**

The purpose of this Program Management Plan is to establish the management framework and the basic policies and expectations for the accomplishment of those tasks under the responsibility of the Director, SRSPO, necessary to develop a sound and justifiable basis for a request for restart authorization. This document also sets forth the responsibilities for the accomplishment of functions and activities necessary to develop this basis and to provide the documented foundation from which the Secretary of Energy may make a well informed, defensible decision.

**SCOPE**

This Reactor Restart Program Management Plan is applicable to all SRSPO organizational elements and their contractors. It also stipulates areas of interactions with organizations outside SRSPO.

**REFERENCES**

1. Secretary of Energy Notice; SEN-6-89, Departmental Organization And Management Arrangements, May 19, 1989
2. Secretary of Energy Notice; SEN-11-89, Setting The New DOE Course, September 5, 1989
3. Savannah River Plant K Reactor Restart Strategy, U.S. Department of Energy, Washington D.C., November 25, 1988

**CONTROLLED COPY****BACKGROUND**

The production reactors at SRS entered into an extended outage period in the late part of the summer of 1988. Although originally intended to be shutdown for only a relatively short period of time, upon further evaluation, it was judged by DOE that considerable upgrades would be necessary prior to permitting reactor operations to resume. This decision was based upon findings from a number of sources, as well as direct observation, that upgrades to the plant safety systems and to the operations were needed to provide reasonable assurance that the plants could be operated safely. These included: the need to improve the management, operations, and maintenance of the reactors, the need to improve reactor systems sufficiently to prevent accidents, (consistent with systematic programs for upgrading older vintage commercial plants), and the need for increased technical vigilance by the DOE staff assigned to oversee reactor operations.

The justification for a recommendation for resumption of operations shall be predicated on a joint consensus between SRSPO and SRRO and will be founded upon acceptable results from the following major efforts: the Safety Evaluation Report (SER), the successful completion of the Reactor Operations Management Plan (ROMP), the assessment of compliance with DOE Orders, closure of restart items within DOE Issue Management, the Environmental Impact Statement (EIS), and the Operational Readiness Review (ORR). Upon establishment of this basis, the Director SRSPO, with the concurrence of the Deputy Director, SRRO, and the Deputy Assistant Secretary for Nuclear Material Production, shall recommend to the Assistant Secretary for Defense Programs that authorization for reactor restart be requested from the Secretary of Energy.

The satisfactory accomplishment of the activities described within this manual will provide the basis and the necessary assurance that SRS reactors can be operated safely, without undue risk to the public, site personnel or the environment. These efforts draw upon the accomplishments of activities discussed below which have occurred since the outage began. The methods and responsibilities for these actions and the required documentation necessary to support the basis upon which the request for restart authorization is made are specified within this manual.

In November, 1988, shortly after the outage began, representatives from DOE-HQ, Department of Energy Savannah River Operations Office (DOE-SR), Du Pont, Westinghouse, and various contractors met in Charlotte, North Carolina to develop a restart strategy for K-Reactor. The representatives were chosen due to experience in reactor operations and their familiarity with SRS reactors. Through discussions between the group as a whole and the various sub-committees which were formed, a consensus was reached as to the path forward. The result was a plan which called for development of programs to provide for improvements to the reactors, and in the conduct of operations and oversight. Further delineation was made as to how much would need to be accomplished prior to restart. This plan was documented in the "Savannah River Plant K Reactor Restart Strategy" (commonly referred to as the Charlotte Criteria). This corrective action document was divided into four broad reactor safety improvement categories; Design Bases and System Performance, Human Performance, Management Systems and Practices, and DOE On-site Technical Vigilance and Monitoring. Long-term and short-term objectives were developed for each of these categories.

Simultaneously, Westinghouse initiated a technical assessment of the SRS reactors in conjunction with the transition from Du Pont to Westinghouse as operating contractor. This assessment focused on the K-Reactor and started with the presumption that the short-term goals of the Charlotte Criteria would be accomplished. The assessment was performed by reviewers from various Westinghouse nuclear organizations who possess expertise in operations, safety analysis, engineering design and severe accident and risk evaluation. These reviewers utilized four requirements in determining areas in need of upgrades; 1) the reactors be capable of being shut down and maintained in a safe condition following normal operation and all anticipated operational occurrences, 2) mitigation systems be available to limit core damage and fission product releases for design-basis and more severe events, 3) post-accident monitoring and accident management capabilities be available, and 4) effective management systems be in place to provide confidence that equipment and personnel are ready for safe operation. The assessment resulted in 50 specific recommendations for upgrade of reactor operations, 24 of which were to be accomplished prior to restart of the first reactor. These results were published in the Westinghouse Independent Safety Review

(WISR) of Savannah River Production Reactors (referred to as the WISR manual).

Upon assuming responsibility as the Operating Contractor in April, 1989, WSRC began development of a plan to accomplish the upgrades which had been identified to safely restart the reactors. This restart plan is the major scheduling document the contractor utilizes and is called the "Reactor Operations Management Plan" (ROMP). The ROMP incorporates portions of the Charlotte Criteria requiring WSRC actions, the 24 pre-restart WISR items, previously scheduled outage work scope, and Quality Assurance (QA) improvements. The ROMP scope and schedule is reviewed and approved by DOE. Furthermore, the ROMP has provisions for being revised to incorporate any emerging safety issues. This is accomplished through a Schedule Change Process which determines an item's scope and schedule. The main mechanism for determining items to be added to the ROMP is the Restart Issue Management Program (RIMP), which screens backlogged and emerging safety issues to determine: if the item needs to be accomplished prior to restart, if the item needs to be accomplished on a priority basis after restart, if the item can be resolved on a non-priority basis after restart, or if the item has already been accomplished. This process provides additional assurance that those identified safety issues which need to be resolved prior to restart are accomplished. Through completion of those tasks specified in the ROMP, WSRC expects to be ready to resume reactor operations.

As part of its function, SRSPO is conducting those actions necessary to provide for the improvements in DOE Technical Vigilance which have been identified by the Charlotte Criteria, as well as other sources. These include 1) the development and implementation of a DOE technical training program, 2) the stationing of trained, qualified DOE staff at each of the reactors to oversee operations, 3) the formation of an engineering group with sufficient technical capabilities to provide competent oversight of WSRC's Engineering group's and the Savannah River Laboratory's design, testing and analytical efforts, and 4) the formation of a group of engineers to provide independent safety oversight of activities associated with plant operations, plant testing, health protection and quality assurance. A set of Administrative Instructions and Procedures are being developed to control these activities and to specify the responsibilities of SRSPO staff members. Through accomplishment of these activities,

SRSPO expects to be capable of providing the degree of oversight and direction necessary to allow resumption of operations.

As prescribed by SEN-11-89, DOE will restart the SRS reactors only after safety of their operations can be assured, and only after health and environmental requirements have been addressed. These vital elements, which are intended to provide for a safe start-up will be validated by both internal and external independent oversight entities established by DOE as well as by law or regulation. The accomplishment of these comprehensive efforts along with their review by highly qualified oversight bodies will provide the assurance that DOE has taken those actions, necessary to ensure safety, prior to allowing operation of the reactors to resume.

## **INSTRUCTION**

The following sections provide a general description of those efforts which comprise the overall reactor restart management strategy being implemented by SRSPO, along with a breakdown of the significant activities associated with the restart effort, and the relationship between the major components. These sections delineate the responsibilities for various aspects of the programs and provide management level guidance to the SRSPO staff. Administrative Instructions shall be sponsored and Division Procedures shall be established by each division director to control those portions of these programs which fall under their cognizance. For those areas where processes which affect all SRSPO activities must be established, it is the responsibility of the Director, Technical Support Division (TSD), to ensure the necessary programs are developed.

It is not intended that this manual discuss all actions which are necessary to be undertaken prior to restart, rather that it address those actions which provide the foundation upon which the decision to allow resumption of operation may be based. A schedule integrating all the activities discussed in this plan will be maintained by TSD.

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## 1.0 Safety Evaluation Report (SER)

An SER shall be developed to provide DOE's evaluation of improvement efforts undertaken by DOE and WSRC, and the ability of the SRS reactors to operate safely. SER acceptance criteria for each area to be evaluated have been developed. Changes to these criteria should be few, but if required, changes will be drafted into letter form for concurrence by the Director, SRSPO, and Deputy Director, SRRO; and approval by the Deputy Assistant Secretary for Nuclear Material Production. SRSPO and SRRO consider the topics discussed within the SER to constitute those areas where acceptable performance should ensure the reactors can resume safe operation such that site personnel, the public and the environment are protected. Each division designates a lead or support engineer as appropriate for each section of the SER for which they have been designated as having lead or support responsibility. The party designated as having the lead is responsible for conducting the evaluation. During the SER development, safety evaluation section writers shall verify the appropriate actions specified by the SER Acceptance Criteria, the Charlotte Criteria, and WISR are bounded within the restart scope. Additions to the ROMP or SRSPO Issue Management program are initiated by the lead division for those actions identified as not being addressed by the restart scope.

The evaluation prepared for the SER shall include consideration of WSRC action taken or planned based on currently existing restart documents and assessments related to the SER section, e.g. the ROMP, program procedures, etc.. The evaluations are approved by the responsible SRSPO/SRRO managers, and forwarded to the SRRO program manager for incorporation into the SER.

To obtain the information necessary to determine SER criteria are being, or have been, adequately addressed, each SRSPO or SRRO division/office assigned lead responsibility for an SER section will develop and execute a plan of inspection or assessments called a validation program. This plan includes, in part, a program review which verifies actions required by the SER restart criteria on the part of WSRC or DOE are adequately addressed in program plans and procedures. Evaluation results of the program reviews shall be documented in either the Draft SER, the Final SER, or in a SER Supplement. It is expected that most of the program requirements required by the SER acceptance criteria will be closed in either the Draft or final SER. For those programs which have been difficult for WSRC to construct or requiring significant changes to existing practices, DOE program reviews may be reported in an SER supplement.

These SER program reviews may generate open items which will require closure prior to restart. When the actions necessary to close each item are completed or implemented sufficiently to determine its adequacy, the final evaluation shall be prepared by the assigned section writer. This evaluation shall discuss the satisfaction of the criteria, specifying how it is satisfied and providing complete references so that the bases for the evaluation is thoroughly documented. Closure of open items identified in the program reviews, will be documented in the final SER or a supplement to the SER. Administrative Instructions shall provide directions to the section writers to guide them in the preparation of the evaluations. Formal WSRC documents, DOE inspection and audit results, and ROMP deliverables can be used as the bases for conclusions stated in the evaluations. All documents relied on shall be discussed in the evaluation section with complete references provided.

Once completed, the final evaluations of those sections for which SRSPO has the lead shall be approved by the responsible Division Director, and transmitted to the appropriate SRRO Division Director for coordination of required SRRO concurrences. Those sections for which SRRO has the lead shall be provided to SRSPO for concurrence. The final product will be approved by the SRSPO and SRRO Managers.



The approved sections shall be retained within SRRO for assimilation into the SER. The final SER shall also include the philosophical basis for the adequacy of the restart criteria. It shall be a management perspective which provides the justification for DOE's conclusion that the SER restart criteria established the required level of performance and engineering support to allow safe operations to be resumed. The SER documentation shall be provided to the Defense Nuclear Facilities Safety Board (DNFSB) for their review.

Validation plans also include implementation reviews to verify implementation of those programs which address the criteria. As part of these efforts, monthly reports are generated in sufficient detail to enable DOE management to assess the adequacy of actions being taken for restart and to identify areas where additional effort is needed or where shortfalls may exist. Performance of the implementation review shall not delay the issuance of the SER. Results of implementation reviews and closure of issues generated by the implementation reviews will be documented in monthly inspection reports.

## **2.0 The WSRC Reactor Operations Management Plan**

The ROMP is the major program and scheduling document the operating contractor utilizes to accomplish upgrades of the reactors, including hardware and personnel. The ROMP was established on the basis that completion of those tasks specified by the WISR, QA requirements, back-logged work items, and the Charlotte Criteria provides sufficient upgrades to allow reactor operations to resume safely. The ROMP specifies those WSRC programs that will accomplish these tasks. As part of WSRC's efforts to ensure the ROMP adequately addressed identified safety issues, a Restart Issue Management Program (RIMP) was established to review previously identified and emerging safety concerns and determine which must be resolved prior to restart, and of these, which are not adequately addressed within the ROMP. Additions to the ROMP are then specified if needed in order to resolve the concern. Additionally, tasks identified by DOE or within WSRC, which have not been addressed and need to be accomplished to

the ROMP are then specified if needed in order to resolve the concern. Additionally, tasks identified by DOE or within WSRC, which have not been addressed and need to be accomplished to provide for safe restart, will be incorporated into the ROMP. Changes to the ROMP are documented and approved through the Scope/Cost/Schedule Change Notice (SCN). When a SCN exceeds a specified threshold it is approved by DOE. A SCN below the specified threshold is internally approved by WSRC only. This includes additional work scope identified by the SER effort. Reactor safety improvement tasks which are identified and determined not to be required prior to restart, shall be included in the contractor's commitment tracking system or in the Reactor Safety Improvement Program (RSIP). **The Director, TSD, is responsible for overseeing the overall maintenance and completion of the ROMP, RIMP and RSIP tasks.** The SER defines specific areas of responsibilities to each SRSPOM director. Each SRSPOM director assigns program managers to oversee each of the specific areas of responsibilities under their cognizance for the acceptable completion of ROMP tasks being performed in that area. These program managers keep management abreast of all major activities or areas where DOE direction is needed. The program managers take into account the status of the ROMP task when preparing assigned SER sections. **TSD is responsible for ROMP items not enveloped by the SER.** TSD is responsible for RIMP process, closure tracking and for **ensuring informational copies of closure packages are provided to the appropriate Division.**

### 3.0 DOE Technical Vigilance

DOE is and has been conducting a number of upgrades in their staff's technical capabilities. Following the issuance of the NAS report in 1987, DOE-SR, and subsequently SRSPOM, began increasing the size of their line organizational staff responsible for overseeing SRS reactor operations. The majority of personnel which have come into DOE as part of this increase have had experience in either commercial or naval nuclear power or both. These new personnel, combined with those who have been at SRS for a period of time, have greatly improved SRSPOM field office capability to provide technically qualified oversight of reactor operations. SRSPOM divisions established training and qualification programs (discussed

in separate section) to provide their staff with the necessary information to allow them to perform the required level of oversight and adequately interact with the contractor. SRSPO also established as part of its technical vigilance, a set of approved instructions, procedures and guides to control its activities (discussed in separate section).

As part of these oversight activities, SRSPO provides continuous monitoring of WSRC's efforts related to the SRS reactors and provide feedback to the contractor on a real time basis. This includes oversight of daily operations performed by Reactor Operations and Training Division's on-site representatives, review of selected safety related areas by the Safety Oversight Division, project overview of WSRC's engineering and lab efforts by the Reactor Engineering Division and overview of WSRC's programmatic tasks by the Technical Support Division. Discrepancies identified by these groups are incorporated into monthly reports and provided to the contractor for resolution. These monthly reports include discrepancies identified during the previous month, items closed during the last month and other items deemed appropriate.

SRSPO divisions shall develop measures to ensure that DOE programs are adequately developed and staffed to provide competent overview of reactor operations prior to recommending that a request for reactor restart authorization be sought. This includes establishing a Restart Monitoring Plan with defined DOE Hold points where determination is required by DOE management that operations are being performed as prescribed prior to granting permission for continuation of restart operations. This also includes 24 hour shift coverage of initial reactor operations by qualified SRSPO engineers.

#### 4.0 DOE Order Compliance

In conjunction with the SER effort, SRRO and SRSPO will assess and verify the adequacy of SRS's compliance with specific DOE and SR Orders. Order compliance by the contractor is assessed as a SER topic. Order compliance is not evaluated in other SER sections. The Orders to be reviewed are determined through a screening of all Orders to establish those related to reactor safety and those required to be evaluated with deficiencies resolved prior to restart. The compliance assessment effort consists of reviews of the degree of compliance and identification of requirements for which compliance cannot be shown. Additionally, WSRC is tasked with conducting an in-depth self assessment of DOE order compliance to identify the full extent of contractor order compliance deficiencies. Documentation shall be prepared and maintained to show those areas of compliance. For areas identified as being in noncompliance, the responsible contractor or cognizant DOE division is required to prepare and submit a request for a Compliance Schedule Approval (CSA), a request for an exemption or a statement that compliance will be achieved prior to restart. A CSA is requested for requirements for which compliance will be attained after reactor restart. The CSA specifies the efforts to be undertaken to achieve compliance with the order, justification for allowing operation while not in compliance (including any compensatory measures being taken) and a schedule for attaining compliance. The contractor or cognizant DOE division may seek permanent relief from requirements by requesting an exemption. This request specifies the area of noncompliance, reasons why compliance cannot be achieved and justification for allowing operations without compliance. WSRC must provide written confirmation any CSA submitted to DOE does not contravene applicable SER criteria. In addition, before restart, WSRC should provide written confirmation that WSRC is in compliance with or has acceptable CSA's or exemptions for DOE Orders required for restart.

## 5.0 SRSPO Issue Management

SRSPO will have in place an issue management program to provide for the management of issues related to the reactors. This program will provide the means for the tracking and resolution of deficient conditions related to safe reactor operation. Items from internal and external audits, surveillances and appraisals, SRSPO monthly reports, open SER sections, DOE Order compliance verification, and other pertinent items which are related to the reactors will be included in the program. These items will be tracked to closure with the aid of the Recommendation and Findings Tracking System (RAFTS). These items shall be screened using RIMP and SER criteria to determine which are required to be resolved prior to restart. The results of this screening shall be approved by the director of the responsible division. Items which are not resolved prior to request for restart will be considered prior to making the request for restart authorization to provide assurance that no item remains unresolved which adversely affects safety. The Director, TSD, is responsible for the development and implementation of this program and for coordinating the activities of other SRSPO divisions with respect to issue management. The Director, TSD, is also responsible for the evaluation, disposition, tracking of resolution, reporting, and closure of findings from external oversight groups (e.g. Advisory Council on Nuclear Facility Safety (ACNFS) and DNFSB). To accomplish this, the Director, TSD, shall establish Administrative Instructions to specify the process for interacting with these external review groups.

The Director, TSD, shall also develop and implement a method for handling Employee Concerns, and for dealing with allegations from internal and external sources. These activities should be consistent with those of DOE-SR. Items which originate from these sources and are related to operations of the reactors (i.e. not a grievance such as discrimination), shall be screened by TSD for inclusion within the issue management system.

**6.0 Operational Readiness Review**

To provide the final assurance that the reactors are ready to be restarted, both WSRC and DOE will perform an ORR. The conduct of the WSRC ORR shall be reviewed by SRSPOM as part of the SER effort. The DOE ORR should be completely independent of those activities. The Director, Reactor Operations and Training Division (ROTD), is responsible for the oversight of the WSRC ORR and ensures it is conducted satisfactorily. The DOE ORR will audit plant activities to confirm that actions taken to correct operational deficiencies have been effective, and to provide management with an accurate assessment of the contractor's readiness to operate safely. This will be used as a second check, independent of the SER and other ongoing review activities to assure readiness for restart. The DOE ORR is not intended to be used to close out SER issues, but may draw upon the SER in the development of areas to be reviewed. The DOE ORR inspection plan will be developed based on similar efforts conducted for troubled commercial plants prior to their restart, and shall be based on a thorough and auditable review to assure that plant staff, plant procedures, and plant hardware interfaces are acceptable for safe restart and operation. The Deputy Director, SRSPOM, shall be responsible for the administration and performance of the DOE ORR.

## **7.0 Long Term Improvements**

In conjunction with their other duties, the SRSPO staff will ensure that plans are developed and implemented, as appropriate, to provide for long term improvements to reactor safety. RSIP is the major project management tool the contractor utilizes to prioritize, scope, schedule and track these long-term improvement programs and projects. The contractor's commitment tracking system provides for long term improvements which do not meet the criteria for inclusion within RSIP. The SRSPO staff shall keep abreast of items under their cognizance within RSIP and the contractor's commitment tracking systems, and interact with the RSIP or commitment tracking staff and contractor managers as necessary to ensure the improvements are adequately implemented. They also ensure that any long term improvements discussed within their SER sections are either already contained within the contractor's long-term improvement program or are incorporated, and that these tasks progress satisfactorily. The Director, TSD, is responsible for programmatic oversight of these long-term improvement programs and for coordination between SRSPO and the contractor in this regard.

## **8.0 SRSPO Training**

SRSPO shall implement a documented, approved training program for staff, and managers. Each Division Director is responsible for the training and qualification of his or her staff, consistent with AI-106, "Training". The Director, TSD, is responsible for coordinating development and implementation of the training programs. This shall include provisions for verification of the effectiveness of the training. The training program for the staff is based on the completion of a qualification program consisting of specified courses and appropriate training modules to be completed for the various positions. The training program for managers involves specific courses and training sessions developed from commercial nuclear industry and Institute of Nuclear Power Operations (INPO) principles and practices plus an in-plant walkthrough orientation.

In addition to the technical based training to be provided to the SRSPOM staff, it shall be the policy of SRSPOM, as prescribed within SEN-11-89, to support developmental training for both staff and managers to ensure that personnel at all levels are fully prepared to carry out tasks expected of them, particularly as they assume new and higher levels of management responsibility.

## **9.0 ADMINISTRATIVE INSTRUCTIONS AND PROCEDURES**

Administrative Instructions (AIs) and supporting procedures shall be developed to implement administrative controls for key activities within SRSPOM. It shall be the responsibility of each division director to ensure that AIs and division procedures, which are adequate to provide consistency in the manner in which duties are performed within their division, are developed and implemented. The Director, TSD, is responsible for coordinating development and implementation of these AIs and division procedures within SRSPOM, and is responsible for the development and implementation of those AIs and division procedures for functions which are SRSPOM wide. These AIs and division procedures shall define and document the duties, responsibilities and authorities for SRSPOM personnel, and provide policy guidance emphasizing the importance of oversight responsibilities. The intent of these procedures is to foster technical vigilance by DOE through effective management controls. It is SRSPOM's policy to maintain aggressive technical vigilance promoted and sustained by management.

## **10.0 REPORTS AND DOCUMENTATION**

### **10.1 Monthly Reports**

Each division shall issue a monthly report documenting findings and observations covering the contractors performance and/or state of reactor facilities which they have observed during that month. This report may also be used to report SER activities as prescribed by the SER section of this management plan. New open items shall be approved by the division director and entered into the issue management



system for tracking in accordance with the SRSPOM Issue Management AI.

### **10.2 Weekly and Biweekly Reports**

The SRSPOM Director's Management Program Analyst is responsible for compiling for the Director, SRSPOM, a weekly and biweekly status report of activities for the ASDP. These reports will discuss key areas of concern or interest, discuss reactor projects, summarize any Unusual Occurrence Reports, summarize significant accomplishments, note upcoming events, relate items which are awaiting actions and address long-term site, program and department-wide issues. Each division submits any input to this report by Close of Business (COB) Thursday so that a draft report may be produced that afternoon to allow the Director, SRSPOM, and the division directors to review prior to Monday. The directors provide any comments or updates on the draft report to TSD Monday morning so that the report can be finalized and issued.

### **10.3 Daily Reports**

The Director, ROTD, is responsible for compiling a daily operations report discussing daily activities associated with the reactors. This report is approved by the Director, ROTD, and specifies reactor status and relates any significant events.

### **10.4 Restart Status**

The Director, TSD, maintains Restart Status for distribution to all directors. This is a collection of raw data, detailing SRSPOM's and the contractor's progress toward restart. It includes actual vs. scheduled completions, changes in float, critical path status, reminder of due dates, etc. It is each division director's responsibility to review this information for accuracy and provide feedback to TSD as needed. Significant information from this effort may be incorporated into the weekly report.

### 10.5 SRSPOM Issue Management Status

The Director, TSD, is responsible for providing status of items within the SRSPOM Issue Management Program consisting of a summary report for distribution to all directors and detailed reports summarizing open findings and observations for distribution to the responsible division director. It is each division director's responsibility to review these reports for accuracy and provide feedback to TSD as needed. This information may also be used as input to the weekly report.

### 11.0 Audit, Surveillance and Program Evaluation Documentation

Developmental data used to provide input into the monthly reports is maintained on file by each division until such time as the report is issued by the Director, SRSPOM. Monthly Reports are maintained on file for two years after closure of the last item addressed in the report. Additionally, input sheets used to enter findings or observations from the monthly reports into RAFTS are provided to TSD for filing with the SRSPOM master RAFTS files. These records are maintained for two years following closure of all items on the respective report. Management walkthrough surveillance records are provided to TSD for entering into SRSPOM issue management and filing in the SRSPOM master RAFTS file. These records are maintained for two years following closure of all items on the respective report.

~~With respect to documentation used in support of preparing the SER,~~ each division director is responsible to provide to TSD, copies of evaluation plans and any reference used to justify conclusions stated in their respective SER sections. These records are maintained by TSD in a master SER file for each reactor for two years after reactor restart.

## **12.0 Environmental Impact Statement (EIS)**

The DOE is preparing an EIS to further the purposes of the National Environmental Policy Act (NEPA). The EIS will assess the environmental effects of the continued operation of the SRS production reactors. The Secretary of Energy has committed to the completion of this EIS prior to resuming nuclear materials production at SRS. The Director, TSD, shall be responsible for coordinating those activities associated with this EIS within SRSPO.

The EIS is a document that uses a systematic, interdisciplinary approach to aid in planning and decision making which may have an impact on man's environment. In the process of creating this document, public comments are solicited, and are incorporated when deemed within the scope of the study.

The Draft EIS is on display in public reading rooms. There will be a 45 day period where public comments on the draft report will be taken. During this time frame, there will be three public hearings. Appropriate revisions are then made and the Final EIS will be issued. This is scheduled for August, 1990, and will be followed by a 30 day period where it will be displayed in public reading rooms and public comments will be taken. After this review and comment period, a Record of Decision will be made as to the outcome of the study prior to restart.

## **13.0 Notification of State and Local Governments of Intent to Restart**

Official announcement of the restart date shall be made by the Secretary of Energy. All official notification of state and local governments will be performed by the responsible headquarters office, either the Office of Congressional and Intergovernmental Affairs or the Office of Public Affairs. As a courtesy, an unofficial and informal notification of state and local governments may be made by the Director, SRSPO, following the official notification.

**14.0 Action Memorandum Requesting Restart Authorization**

Pursuant to SEN-16-90, the Program Secretarial Official (PSO) is required to obtain the approval of the Secretary of Energy for restart of the SRS reactors. This approval for restart shall be obtained by means of an Action Memorandum for the Secretary's signature. This Action Memorandum is prepared by TSD for the Director, SRSPO, and contains a summary of the circumstances which led to the decision to shut down, the actions taken to assure safety of operations and the projected date for restart. Concurrence on the memorandum shall be obtained from the Director, SRRO, and then it shall be provided to the Deputy Assistant Secretary, Nuclear Material Production and the ASDP as a vehicle for obtaining the Secretary's approval.

**SUMMARY**

The completion of the efforts described above provides the basis and the justification for a request for restart authorization. This integrated approach provides the assurance that reactor operations can be resumed safely. It further demonstrates that all reasonable efforts have been undertaken to assure the operation of the SRS reactors will not subject the site employees, surrounding populace nor the environment to undue risk or hazards, and that the reactors are fully capable of safely performing their intended functions.