

ATTACHMENT TO AEP:NRC:1303

RESTART PLAN - REVISION 2

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## Cook Nuclear Plant Restart Plan

John R. Sampson

J. R. Sampson  
Site Vice President

5/6/88

Date

Revision 2

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## Cook Nuclear Plant Restart Plan

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## **1.0 Introduction and Overview**

### **1.1 Purpose**

The Cook Nuclear Plant Restart Plan describes the activities and controls that will be implemented to ensure the facility is ready to safely start up and operate in an event free manner. To provide us with the assurance that this can be accomplished we must determine that our people, plant and programs are ready to meet this challenge. The plan will assess these areas and identify any needed action to ensure we can safely startup and operate reliably in an event free manner. The plan will assess the following:

- **People**

Have we adequately prepared our people such that they are trained on the changes in our programs and procedures and understand the issues involved in restarting and operating the plant? Are the functional areas staffed, organized and functioning at a level to support safe startup and reliable operation in an event free manner?

- **Programs**

Have our programs and procedures been adjusted to include the lessons learned? Are they adequate to allow us to return to operation and prevent future nonconforming conditions?

- **Plant**

Are our materiel condition, configurations, restart readiness of systems and ability to meet design function while complying with applicable regulations adequate to allow us to return to service?

This plan provides a map to conduct the assessments needed to assure ourselves that we are ready to restart. The actions and activities needed to do this and any corrective actions will be performed in accordance with approved procedures.

### **1.2 Background**

During the July - September, 1997, timeframe, the NRC conducted an architect engineering inspection at Cook Nuclear Plant. The AE inspection focused primarily on two safety systems, ECCS and CCW. Six weeks into the AE inspection, a question surfaced regarding our ability to sustain long-term cooling of the core during a design basis accident. As a conservative measure, both units were shut down on September 9<sup>th</sup> and cooled to cold shut down until this question could be properly answered.

On September 12<sup>th</sup>, the NRC concluded the AE inspection with a public exit meeting. Following this meeting, Cook Nuclear Plant committed to addressing and resolving seven (7) specific issues identified during the inspection prior to restart of the units. It was believed that these seven issues could be resolved within a few weeks. Subsequent to our letter to the NRC committing to these actions, the NRC issued a confirmatory action letter (CAL) identifying their approval would be required prior to restarting the units. The NRC CAL also identified two additional actions to be taken as a condition for restarting the units.

The unit 2 reactor was scheduled for a refueling to begin in late September, 1997. The unit 2 core was within two weeks of normal burn up window at the time of the unscheduled shut down. Our objective was to resolve the CAL items, and restart unit 2 for the remaining two weeks of fuel burn up, then commence the refueling outage.

Over the next several weeks, it became apparent that a restart would not be achievable in the near term, and a decision was made to begin the unit 2 refueling outage and its scheduled work on October 20, 1997. In parallel with the outage work, our organization worked through the many AE inspection/CAL issues. It appeared that a January 1998 restart of both units would be feasible.

During the time period of January - February 1998, the Cook Nuclear Plant senior management team had several meetings with the NRC, and the CAL issues were nearing resolution. It was during this time period that several new issues arose, concerning or relating to our containment systems that would require significant resources and focus to reconcile.

Given the significant period that both units had been shut down up to this point, and the uncertainty for a near-term start up date, it was decided that the scope of both units' outages needed to be re-evaluated, and a more rigorous assessment of plant readiness was required prior to any restart. These steps are necessary in order to achieve the objectives described in Section 1.1. The key factors that led to this decision are:

- Design basis concerns and equipment performance and testing issues which have come to light in recent months raised the concern that additional hardware and non-hardware activities may need to be completed during this extended shut down.
- Confirmation is required that procedure inadequacies or equipment deficiencies that may challenge plant operators during normal, abnormal, or emergency conditions have been adequately identified and addressed.
- Lessons learned from other nuclear utilities in the implementation of an integrated assessment of readiness to restart following an extended shutdown

period are being adopted and applied to Cook Nuclear Plant on a pilot basis during this outage.

### **1.3 Roles and Responsibilities**

Roles and responsibilities for the execution of this plan are as follows:

#### **1.3.1 All Nuclear Generation Employees**

Responsible for supporting the restart activities by focusing on safe operations and continuous improvement. All employees are obligated to raise any and all quality concerns to management's action through the corrective action program.

#### **1.3.2 System Engineers**

Responsible for successful completion of restart work on selected systems, performing an assessment of system readiness to support unity restart and safe, reliable power operations, implementing necessary corrective actions and providing affirmation of readiness.

#### **1.3.3 System Engineering Review Board (SERB)**

Board internal to the engineering organization responsible for assessing the readiness of plant systems and providing recommendations for additional restart scope to the ROC. The SERB charter is provided in attachment A.

#### **1.3.4 Restart Oversight Committee (ROC)**

Responsible for determining the restart scope of work using consistent standards and criteria approved by the senior management review team (SMRT) and assessing the readiness of Cook Nuclear Plant to restart and resume power operations, using the process approved by the SMRT in this procedure. The ROC charter is provided in attachment B.

#### **1.3.5 Senior Management Review Team (SMRT)**

Members:     Site Vice President (Chairman)  
                 Vice President Nuclear Engineering  
                 Director Performance Assurance  
                 Director Regulatory Affairs  
                 \*Independent Safety Review Committee Member

\*This member will actively participate as available, and will perform a continuous oversight role. Routine communication with this member may



be accomplished through review of meeting minutes, phone conferencing and follow up interviews with the SMRT members.

The SMRT is responsible for generation and approvals of:

- (a) criteria for screening work items required for completion of restart; and,
- (b) monitoring and oversight of the process for affirmation and approval of plant and staff readiness for restart.

#### **1.3.6 Plant Manager, Engineering Managers and Department Superintendents**

Responsibility for successful completion of the restart work, performing an assessment of functional area readiness to support unit restart and safe, reliable power operations, implementing necessary corrective actions and providing affirmation of readiness to the ROC.

#### **1.3.7 Restart Manager**

Responsibility for the management and control of restart work activities including the scheduling of activities and coordination of resources.

#### **1.3.8 Site Vice President**

Overall responsibility for the management and implementation of the restart plan to achieve the purpose described in section 1.1. Serves as chairman of the (SMRT).

#### **1.3.9 Executive Vice President Nuclear Generation**

Responsible for authorizing startup and power ascension, and providing senior management oversight of the restart process.

#### **1.3.10 Plant Performance Assurance**

Responsible to discharge performance assurance responsibilities under 10 CFR 50, Appendix B, to provide assurance that activities affecting quality are satisfactorily accomplished. See Attachment F for further details.

### **1.4 Cook Nuclear Plant Restart Process Overview**

The restart plan consists of the following major activities:

- (1) scope determination
- (2) work performance
- (3) readiness assessment

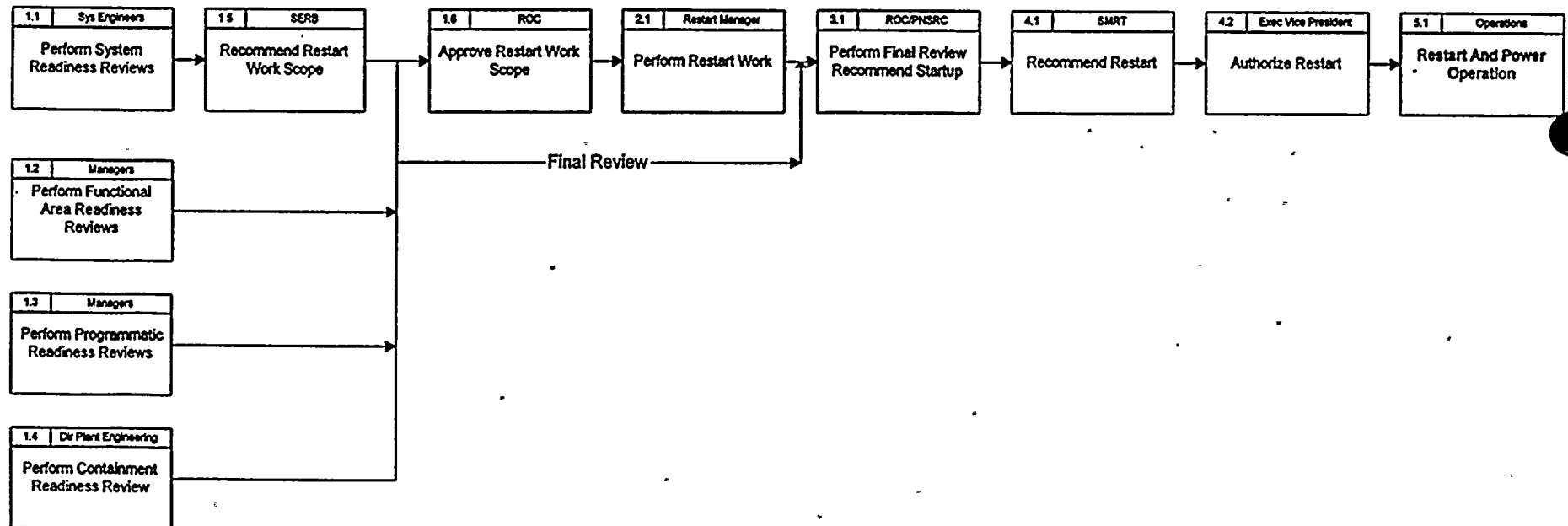


- (4) startup authorization
- (5) startup and power ascension

Following is a process map and summary of the activities with more detailed information presented in later sections of this document.



## Cook Plant Restart Plan Overview



**Restart Readiness  
Assessments**

1.1	Sys Engineers
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Perform System Readiness Reviews
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1.2	Managers
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Perform Functional Area Readiness Reviews
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1.3	Managers
-----	----------

Perform Programmatic Readiness Reviews
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1.4	Dir Plant Engineering
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Perform Containment Readiness Reviews
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1.5	SERB
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Recommend Restart Work Scope
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The objective of the restart readiness assessment is to ensure that the integrated set of plant equipment, human resources and work programs are capable of supporting safe and reliable power operations. The restart readiness assessment will be initiated in parallel with the execution and completion of restart work.

The restart readiness assessment will focus on the following areas:

- plant system readiness
- functional area readiness
- programmatic readiness
- containment readiness

The restart work scope may be increased as a result of the plant system assessments or other ongoing work. The system engineers will recommend the restart work scope to the System Engineer Review Board (SERB).

<table border="1"> <tr> <td>1.6</td><td>ROC</td></tr> <tr> <td colspan="2">Approve Restart Work Scope</td></tr> </table>	1.6	ROC	Approve Restart Work Scope		<p>All restart scope additions will be approved by the Restart Oversight Committee (ROC).</p>
1.6	ROC				
Approve Restart Work Scope					
<table border="1"> <tr> <td>2.1</td><td>Restart Manager</td></tr> <tr> <td colspan="2">Perform Restart Work</td></tr> </table>	2.1	Restart Manager	Perform Restart Work		<p>Following determination of the restart work scope by the ROC, the restart manager is responsible for coordinating the planning, scheduling and completion of the work.</p>
2.1	Restart Manager				
Perform Restart Work					
<table border="1"> <tr> <td>3.1</td><td>ROC, PNSRC</td></tr> <tr> <td colspan="2">Perform Final Review Recommend Startup</td></tr> </table>	3.1	ROC, PNSRC	Perform Final Review Recommend Startup		<p>Results of the restart assessment will be presented to the Restart Oversight Committee (ROC) with an affirmation by the responsible system engineer or engineering manager, and the functional area superintendent of the readiness of the system or organization to support plant startup and safe, reliable power operations.</p>
3.1	ROC, PNSRC				
Perform Final Review Recommend Startup					
<table border="1"> <tr> <td>4.1</td><td>SMRT</td></tr> <tr> <td colspan="2">Recommend Restart</td></tr> </table>	4.1	SMRT	Recommend Restart		<p>Following presentation and acceptance of the assessment results by the ROC, the Site Vice President will convene the SMRT to perform an integrated review of the affirmations, verify compliance with regulatory commitments and any other special criteria that may impact the initiation of startup activities.</p>
4.1	SMRT				
Recommend Restart					
<table border="1"> <tr> <td>4.2</td><td>Exec Vice Pres</td></tr> <tr> <td colspan="2">Authorize Restart</td></tr> </table>	4.2	Exec Vice Pres	Authorize Restart		<p>Based on the results of this review, the Executive Vice President Nuclear Generation will authorize startup and power ascension.</p>
4.2	Exec Vice Pres				
Authorize Restart					
<table border="1"> <tr> <td>5.1</td><td>OPS</td></tr> <tr> <td colspan="2">Startup and Power Ascension</td></tr> </table>	5.1	OPS	Startup and Power Ascension		<p>Startup and power ascension following the completion of startup work will follow a deliberate and controlled approach that ensures operational and personnel safety. The normal startup process defined in Cook Nuclear Plant procedures will be supplemented with appropriate management oversight and support from engineering and maintenance organization such that issues or concerns are promptly addressed and the startup can be accomplished in a safe, controlled manner.</p>
5.1	OPS				
Startup and Power Ascension					





## **2.0 Restart Work Scope Determination**

### **2.1 Restart Work Scope Determination Process**

The restart work scope is being defined through a determination process driven by the ROC consistent with their charter. Outstanding work items and selected programmatic issues are reviewed against defined criteria to determine which items should be included in the restart scope. System engineers have the largest role in this process, but there is also considerable involvement from other organizations including operations, design engineering, and maintenance. The restart work scope determination process is outlined in attachment E.

### **2.2 Plant System Review**

Plant systems are reviewed by the system engineer using the plant system review instructions with results and recommendations presented to the ROC.

The plant system review process consists of four primary elements as described below.

#### **2.2.1 Selection of Plant Systems**

Plant systems have been selected for a detailed review and affirmation based on the historical performance and risk significance of the system. This review will be performed in accordance with the plant system readiness review instructions. Results of the assessment of selected systems will be presented first to the SERB and, upon approval, to the ROC with appropriate recommendations for additional actions to be performed after restart. The systems are listed in attachment D.

The remaining systems will be assessed and evaluated as part of the line responsibility of the engineering organization through the use of the SERB. Issues that affect restart scope on these systems will be presented to the ROC on a case basis.

#### **2.2.2 Restart Work Scope Additions**

The restart work scope addition for plant systems is focused on those items not already included in the restart work scope. Items already scheduled for completion prior to restart are not evaluated against the criteria provided in attachment C unless there is a proposal to delete them. The goal of the system review and work scope addition process is to define the work necessary for completion prior to restart such that the system is capable of supporting safe and reliable power operation. This review will include the following:

- (a) the magnitude, significance and risk of items which will be resolved after restart should be defined and evaluated;
- (b) assurance that recurring problems on the system that could affect safe and reliable operations are being fixed;
- (c) assurance that any design basis and licensing issues on the system are being addressed within a time frame that is appropriate for the issue; and
- (d) assurance that operators will not be unnecessarily challenged in the operation of the system during normal, abnormal, or emergency conditions.

Based on the review of open work items against the criteria presented in attachment C, the system engineer is to provide recommendations for the restart scope changes for the selected systems in attachment D to the SERB and upon approval to the ROC. Items recommended for addition to the restart scope for remaining plant systems will be handled on an item specific basis by the ROC following an initial review by line management. It should be noted that it was not the intent of this program to resolve all design basis issues. We are committed to a long range program to accomplish this resolution.

#### **2.2.3 Monitoring Restart Work, Addressing Emergent Issues and Performing a More Detailed Assessment of System Readiness**

System engineering is to monitor the progress of work on assigned system and address emergent issues as required. Any major restart scope impacts defined by emergent issues should be brought to the ROC following line management review. All other emergent issues are assessed daily by the engineering managers.

Also, the system engineer is to use this period to complete the assessment and evaluation of system readiness in preparation for the final system readiness review and affirmation of readiness for restart.

#### **2.2.4 Final System Readiness Review and Affirmation**

This aspect of the system readiness review process is summarized in section 4.1. Although it is not expected that any significant restart work scope issues will be identified during this final review, if any are identified, they are to be brought to the immediate attention of the ROC (following line management review).



## **2.3 Redefined Restart Work Scope**

The restart work scope may be redefined based on the evaluation process described above. Decisions made by the ROC regarding the restart work scope are documented in meeting minutes and work item status is tracked.

## **3.0 Restart Work Scope Performance**

### **3.1 Work Scope Performance**

Following determination of the restart work scope by the ROC, the restart manager is responsible for coordinating the planning, scheduling and completion of the work, including the implementation of programmatic changes. The restart work scope performance process is outlined in attachment E.

## **4.0 Restart Readiness Assessment**

The restart readiness assessment is an integrated line management assessment that assists station management in determining the readiness to initiate startup and achieve safe, reliable power operation through the next operating cycle. The restart readiness assessment process is outlined in attachment E. This form of assessment is one element of a comprehensive plant assessment program that is the foundation of our continuous improvement philosophy. Implementation of this action is consistent with the experience and lessons learned of other nuclear utilities. The restart readiness assessment is being implemented at Cook Nuclear Plant based on lessons learned and will be captured such that this process can be implemented on a routine basis in the future.

The restart readiness assessment for restart will verify the completion of all defined restart work and the affirmation of system, department and restart readiness for startup and power operations. Results of the assessment and affirmation of readiness will be presented to the ROC by the responsible system engineer, functional area manager and operations shift supervisor. Following acceptance by the ROC, the site vice president will convene an SMRT meeting to review these affirmations and verify compliance with regulatory commitments and any other applicable criteria. The site vice president will recommend start up of the units based on this review, and assurance regarding the readiness of the station to initiate startup and safely, reliably operate through the next operating cycle.

Following is a summary of the key elements of the program.

### **4.1 System Readiness**

System readiness affirmations by the system engineer are to confirm that plant systems meet functional design requirements, have been suitably tested and are ready to support safe and reliable startup and operation through the next cycle. This affirmation is based on the work completed as described in section 2.2, and is to



include a coordinated system walkdown of the system with operations and maintenance personnel on systems defined by the plant engineering manager. Where necessary, compensatory actions for rescheduled work or other areas of performance risk are to be defined and addressed.

System readiness affirmations are to be presented by the system engineer to the SERB and upon its approval to the ROC for the systems identified in attachment D. Affirmation of system readiness is documented with the signature of the system engineer and manager. Affirmation of individual system readiness for the remaining plant systems will be addressed as part of the system engineering line management responsibility and will be one element of the functional area readiness evaluation.

#### **4.2 Functional Area Readiness**

Functional area readiness by selected functional areas is an affirmation that the department is in an appropriate state of readiness to support startup and safe and reliable power operation through the next cycle. Functional area readiness will include items such as:

- (a) adequacy of staffing levels, personnel experience and qualifications to demonstrate compliance with regulatory requirements and commitments;
- (b) completion of personnel training on normal startup evaluations, power ascension requirements, industry operating experience including extended shutdown and unusual events at similar plants, emergency preparedness, changes in plant configuration, changes in plant operating and emergency procedures, and changes in key administrative procedures and processes;
- (c) resolution of significant performance deficiencies and reduction of backlogs (corrective action, corrective maintenance etc. ) to manageable levels; and
- (d) establishment of goals and priorities for the continued improvement of the department including use of critical assessment methods.

Functional Area readiness will be affirmed to the ROC by the following functional areas:

- |                          |                               |
|--------------------------|-------------------------------|
| • operations             | • outage management           |
| • maintenance            | • licensing                   |
| • plant engineering      | • fuels                       |
| • design engineering     | • plant protection            |
| • production engineering | • information management      |
| • chemistry              | • plant performance assurance |
| • radiation protection   |                               |

Affirmation of functional area readiness is documented with the signature of the functional area manager.



#### **4.3 Programmatic Readiness**

Programmatic readiness review will confirm that programs are in place to support identification and correction of problems. Programmatic issues identified during the unit shutdown have been evaluated and necessary corrective or preventive actions have been completed. Programs in place at the time of unit start-up will ensure that the plant will be operated in conformance with its design bases and in accordance with the AEP quality assurance program.

A/E programmatic issues  
potential bypass of 50.59 safety evaluations  
50.59 safety evaluation quality  
corrective action program improvements  
surveillance program assessment

#### **4.4 Containment Readiness**

The containment readiness review will focus on the ability of the containment system to meet the intended functional design requirements. The critical points of the review will focus on the system materiel condition, adequate surveillance testing, and the system configuration control.

### **5.0 Restart Authorization**

The restart authorization process is outlined in attachment E.

#### **5.1 Restart Oversight Committee (ROC) Review and Approval**

The ROC will review and accept the assessment affirmations in 4.1, 4.2, 4.3 and 4.4. A restart recommendation will be made to the SMRT based on the results of the functional area assessments.

#### **5.2 Senior Manager Review Team (SMRT) Review and Approval**

Upon review and acceptance of the assessment affirmations in 4.1, 4.2, 4.3 and 4.4 by the ROC, the site vice president will convene an SMRT meeting to perform an integrated review and approval.

#### **5.3 Executive Vice President Restart Authorization**

Based on this review the executive vice president nuclear generation will provide the authorization for restart and power ascension.





## **6.0 Startup and Power Ascension**

Startup and power ascension, following the completion of the restart work will follow a deliberate and controlled approach that ensures operational and personnel safety. The normal startup management team will be augmented with a shift plant manager and shift engineering manager such that issues or concerns are promptly addressed and the status can be accomplished in a safe, controlled manner. The startup and power ascension actions summarized in this section do not change or alter any requirements of the startup procedures defined above.

### **6.1 Management Oversight and Organizational Support**

The Cook Nuclear Plant management structure will be supplemented with a shift plant manager and shift engineering manager to compliment the shift maintenance manager during the startup and power ascension phase. The responsibilities of these positions are as follows:

#### **6.1.1 Shift Plant Manager**

The shift plant manager provides on-shift (24-hour) presence as a direct representative of the plant manager and is responsible for maintaining an overall perspective of the startup process. If necessary, the shift plant manager is authorized to request operations to delay the startup, reduce power, or shutdown to make necessary repairs.

#### **6.1.2 Shift Engineering Manager**

The shift engineering manager provides on-shift (24-hour) presence as a direct representative of the plant engineering manager and is responsible for maintaining an overall perspective of engineering support of the startup process. The shift engineering manager will control on-shift engineering resources as necessary to support scheduled startup testing activities, resolve emergent operability issues, support maintenance and manage necessary reactor engineering test activities.

#### **6.1.3 Shift Maintenance Manager**

The shift maintenance manager provides on-shift (24-hour) presence as a direct representative of the maintenance manager and is responsible for maintaining an overall perspective of maintenance support of the startup process. The shift maintenance manager will control on-shift maintenance resources as necessary to support scheduled startup testing activities, resolve emergent equipment issues, and support operations.



This organization will be implemented as directed by the plant manager at critical evolutions during startup such as change to mode 4, initial criticality, turbine roll, and parallel to grid. The organization will be disbanded as directed by the plant manager but not before mode 4 to 30% power.

## **6.2 Operating Proficiency and Experience Review**

To minimize the potential for performance errors during the plant startup, the following actions will be taken:

- operations personnel will utilize the simulator to practice the startup evolution and ensure understanding and proficiency with applicable startup procedures and special requirements;
- a review of past Cook Nuclear Plant startup issues relevant industry operating experience will be performed during the functional area reviews to ensure understanding of past experience and lessons learned;
- department communication meetings will be conducted with each plant department to discuss management expectations regarding the startup and power ascension processes, schedule, and responsibilities. These meetings will be completed prior to initiating the startup evolution.

## ATTACHMENT A

### SYSTEM ENGINEERING REVIEW BOARD (SERB) CHARTER

**PURPOSE:** Perform a system-based, multi-disciplinary technical review of potential restart issues associated with risk significant plant equipment. This board will ensure consistent application of the restart criteria contained in Attachment C of the Cook Nuclear Plant Restart Plan among system engineers, and ensure that restart decisions reflect the shared concerns of Operations, Maintenance and Engineering. The result of this review will be to define the equipment related work which is needed to ensure a safe and event free startup and achieve a reliable post startup operating cycle.

#### **MEMBERS:**

Director Plant Engineering (Chair)  
Mechanical Component Manager  
Electrical System Manager.  
Safety and Analysis Manager  
I&C Manager  
Performance Testing Manager  
Preventive Maintenance Manager  
Board Secretary

Non-Member: Additional attendance by members of Restart Oversight Committee is expected to reinforce expectations and provide oversight for the restart Issue review process.

Alternate chair: Site Engineering Managers

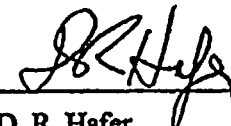
Alternate safety and analysis manager: Engineers in the Safety and Analysis Section, subject to acceptance of the SERB chair or alternate chair.

**QUORUM:** Chair (or alternate), two Onsite Managers, Safety and Analysis Manager (or alternate), and Secretary.



**ACTIONS:**

1. Review all potential restart items identified by System Engineers based on criteria defined in the restart plan; the System Engineer will present the proposed restart items for discussion. A representative of Operations and Maintenance knowledgeable of the system's restart issues will support the system engineer and ensure the perspective of the other production groups is considered. The Operations representative will normally be an SS or a US of the Operations crew responsible for the system, but can be an SS assigned to the Work Control Center.
2. Designate systems that are required to be presented to the SERB by system engineer, Maintenance and Operations.
3. The SERB will review all items identified as potential restart issues by the system engineer system readiness review. The system engineer, Operations or Maintenance representatives will also identify other issues which are not identified as potential restart issues but may be questioned.
4. A complete list of open issues on each system will be available during SERB meetings. The SERB will review and question additional items as desired to determine if they should be restart issues.
5. Ensure a record of all decisions and concerns raised by the SERB review is documented for future review.
6. As a result of the review, recommend specific potential restart items for approval by the ROC.
7. Review and approve the charter and any revisions needed to support the restart plan. Disband this board after startup when directed by the Site Vice President.

  
\_\_\_\_\_  
D. R. Hafer  
Director of Plant Engineering





## ATTACHMENT B

### RESTART OVERSIGHT COMMITTEE (ROC) CHARTER

**PURPOSE:** Exercise management oversight and approval of physical and programmatic work scope necessary to ensure a safe and uneventful unit startup, and achieve a reliable operating cycle.

#### **MEMBERS:**

Position	Primary	Alternate
Plant Manager , Chair	Doug Cooper	Bob Gillespie
Operations Superintendent Vice Chair	Bob Gillespie	Guy Tollas
Production Engineering Director	Ken Baker	Alberto Verteramo
Plant Engineering Director	Don Hafer	Mike Finissi
Maintenance Superintendent	John Boesch	Mark Stark
Licensing Manager	Mark Ackerman	Gordon Arent
Chemistry Superintendent	Dave Morey	Bob Claes
Radiation Protection Superintendent	Doug Noble	Paul Holland
Training Superintendent	Dennis Loope	Dennis Willemin
Restart Manager	John Stubblefield	Dick Strasser
Restart Plan Project Manager*	Phil Gora	
Secretary*	Betty Clark	Sandy McClintock

\*Indicates non-voting members

**QUORUM:** Chairperson or vice chairperson, and three (3) additional voting members, two of which must be primary members. Attendance from Performance Assurance and Business Performance is strongly encouraged to perform an active oversight role.

#### **ACTIONS:**

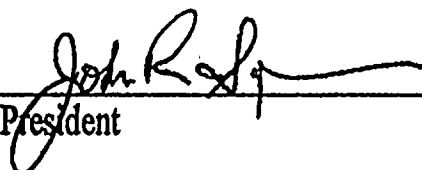
1. Set and communicate expectations for the organization to evaluate work items against the restart scope criteria.
2. Ensure screening criteria are consistently applied via the restart oversight committee review, meeting and approval process.



Some items that meet one or more of the criteria may be deferred until after restart if there is special consideration that provides the basis for this decision. Examples may include items that are only a concern during certain seasons, reduced risk of performing the work during a system outage, or implementation of adequate compensatory actions until a long-term solution is defined. A clear basis for deferral of these items is to be provided.

3. Review and approve:
  - A. Restart action items to be completed prior to startup.
  - B. Station readiness to initiate until startup and power ascension as determined by the results of the assessment of readiness to start up.
4. Maintain a record of presentations, discussions, deliberations and basis for decisions and recommendations.
5. Review charter as necessary to accommodate changing conditions.

Convene as necessary to accomplish this charter prior to and during startup.  
Disband after unit startup when directed by the site vice president.

  
\_\_\_\_\_  
Site Vice President

5/6/98  
\_\_\_\_\_  
Date

## ATTACHMENT C

### CRITERIA FOR WORK INCLUDED IN RESTART SCOPE

To be included in the plant restart work scope, items must meet the following criteria:

#### 1. Level 1 Screening

Resolves an immediate industrial or nuclear safety, operability or regulatory issue. These issues will be mandatory restart items.

1. Necessary to address the voluntary shutdown for the A/E inspection and related programmatic issues.
2. Necessary to address the confirmatory action letter.
3. Required to return an INOPERABLE system, subsystem or component to OPERABLE status.
4. Required to resolve an immediate industrial or nuclear safety concern.
5. Necessary to address regulatory commitments.

#### 2. Level 2 Screening


Not an immediate industrial or nuclear safety, operability or regulatory issue. These issues will be considered for addition to the restart item list based on the review and recommendations of plant engineering, operations, and maintenance if the action:

1. Eliminates an existing component failure, deficiency, or condition that could result in operation in, or entry to, an LCO action statement.
2. Resolves existing deficiencies or conditions that:
  - a. would result in failure or inability to perform a required surveillance test during the current outage or the following operating cycle in accordance with the plant technical specifications;
  - b. would increase the risk to operation for safety associated with performing a surveillance; or
  - c. would result in the failure to meet a license requirement or a restart commitment to an outside agency.



3. **Restores** degraded critical components or conditions that could result in a plant transient, power reduction or shutdown.
4. **Resolves** conditions that have resulted in repetitive safety system or equipment failures.
5. **Restores** licensing basis deficiencies to conforming conditions (extended programmatic reviews and scheduled corrective actions may be completed post-restart with the proper justification of no safety impact, a satisfactory OPERABILITY determination, and appropriate regulatory communication).
6. **Corrects** equipment with design basis deficiencies; i.e., deficiencies in safety-related or technical specification equipment not in conformance with design basis documents such as the FSAR (extended programmatic reviews and scheduled corrective actions may be completed post-restart with justification of no safety impact, a satisfactory OPERABILITY determination and appropriate regulatory communication).
7. **Corrects** deficiencies in configuration management programs, processes, engineering analysis codes, or operating, maintenance, or test procedures that have a reasonable probability of affecting equipment OPERABILITY (documentation deficiencies, which have no safety impact, may be completed post-restart).
8. **Eliminates** conditions that create a potential for personnel radiation exposure, radioactivity release, or effluent discharge in excess of limits.
9. **Reduces** cumulative deficiencies, backlogs or conditions that, in the aggregate, are evaluated to have significant negative impact on safety, operability or reliable plant operation. (Not applicable to individual work items).

Approved:

  
Site Vice President



ATTACHMENT D .

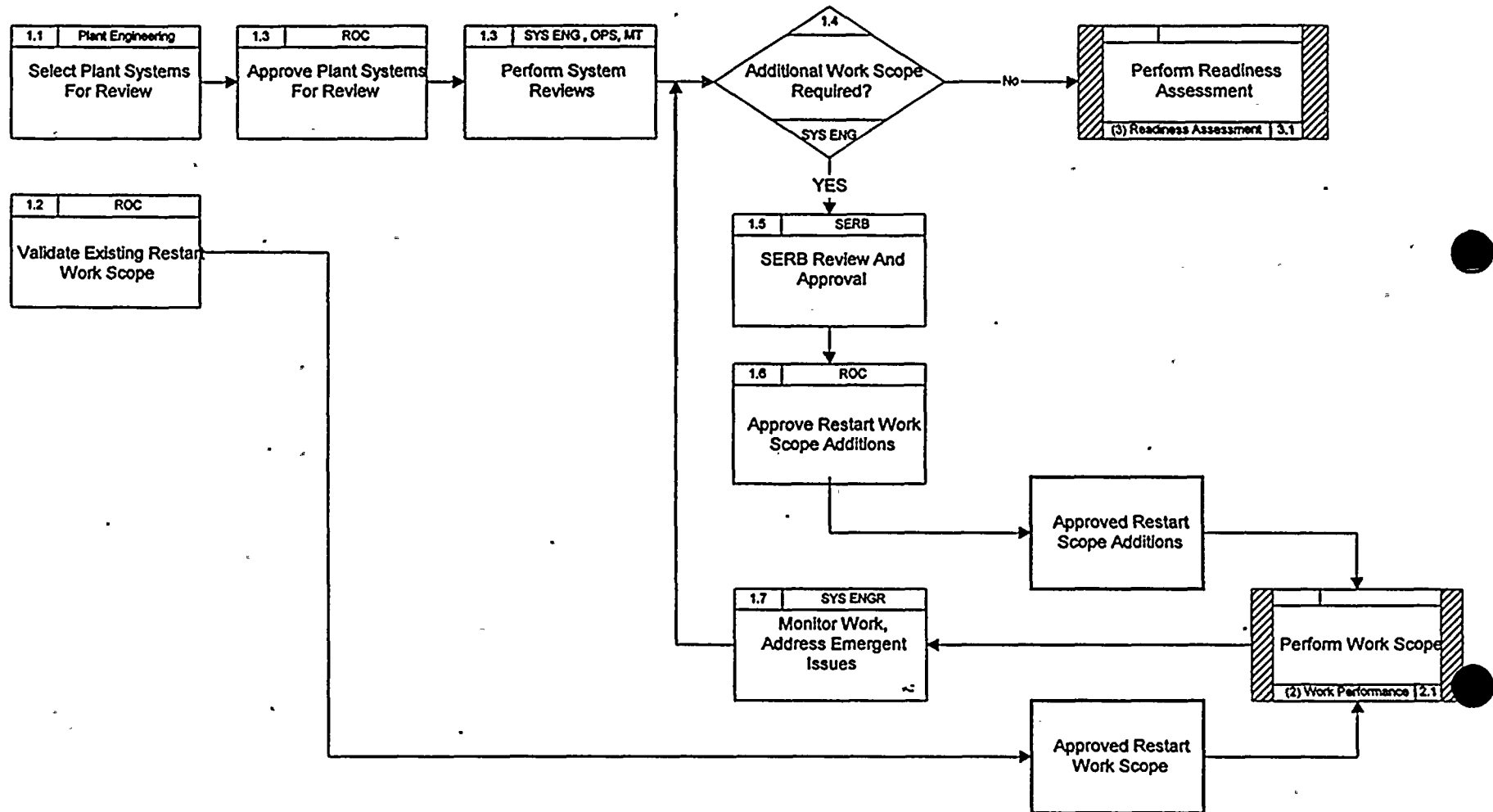
**SELECTION OF PLANT SYSTEMS**

120 Vac/CRID Inverters  
Air Recirculation/Hydrogen Skimmer  
Auxiliary Feedwater  
250 Vdc Station Batteries  
Component Cooling Water  
Containment  
Containment Spray  
Control Air  
ECCS Accumulators  
ECCS Charging Modes 1, 2, 3/CVCS High-head Injection  
ECCS RHR  
ECCS SI  
Electrical Safety Busses (4000 V/600 V)  
Emergency Diesel Generators  
Essential Service Water  
Ice Condenser  
Main Steam  
Non-essential Service Water  
Plant Air Compressors  
Reactor Coolant System/RCS Pressure Relief  
Reactor Protection System/Solid-state Protection/ESFAS

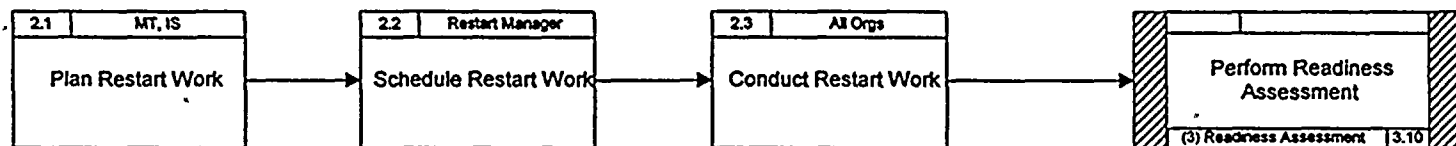




## (1) Restart Work Scope Determination

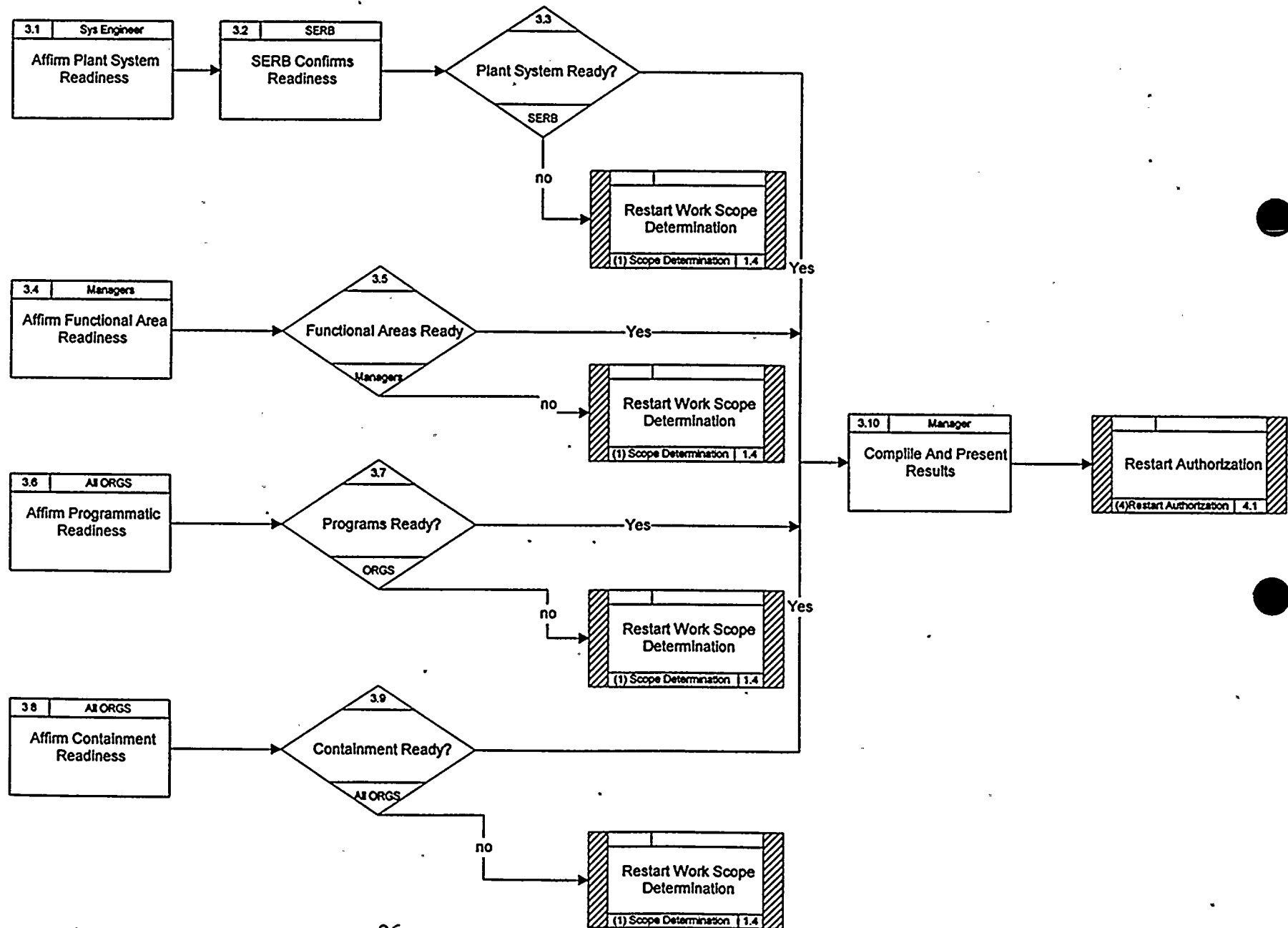


## (2) Restart Work Scope Performance





### (3) Readiness Assessment

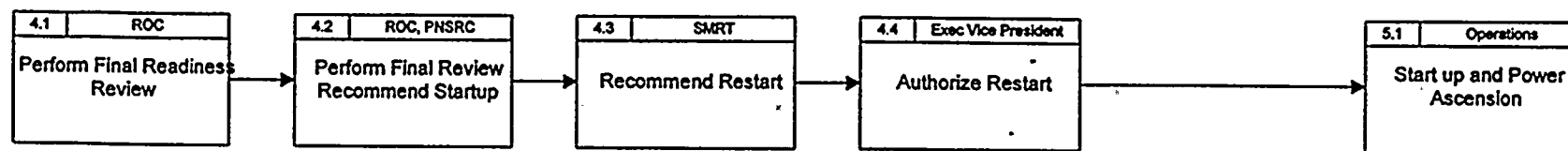




ATTACHMENT E Restart Process Map

**(4) Restart Authorization**

**(5) Power Operation**





## Performance Assurance Oversight of Restart

The purpose of this oversight effort is to discharge Performance Assurance responsibilities, under 10 CFR 50, Appendix B, to provide assurance that activities affecting quality are satisfactorily accomplished. This oversight will include providing independent feedback to line management concerning the adequacy of the restart plan and how effective the plan is being implemented. To enhance independence, personnel conducting this oversight will include those who have not been involved with the evolution of practices and lessons learned as the Restart Plan has been implemented.

Critical activities were identified from the restart plan. Critical attributes of these activities were identified and scheduled for oversight as follows:

### List of Critical Activities

- System Readiness Reviews
- Functional Area Reviews
- Programmatic Reviews
- Containment Readiness Reviews
- Determination of Restart Work Scope
- Restart Work
- SERB
- ROC
- Integration of Reviews
- Startup and Power Ascension

### Critical Attributes of Critical Activities

#### System Readiness Reviews

- Are the right systems being reviewed?
- Are the right methods being used to conduct the reviews?
- Are the reviews effective?

#### Functional Area Reviews

- Are the right areas being reviewed?
- Are the right methods being used to conduct the reviews?
- Are the reviews effective?

#### Programmatic Reviews

- Are the right programs being reviewed?
- Are the right methods being used to conduct the reviews?
- Are the reviews effective?

#### Containment Readiness Reviews

- Is the right scope being reviewed?
- Are the right methods being used to conduct the reviews?
- Are the reviews effective?

#### Determination of Restart Work Scope

- Is the right criteria being used to determine restart work scope?
- Are there any hidden inventories of items that are not being considered?
- Review work not included in restart?
- Adherence to Criteria
- Expert Judgement





## ATTACHMENT F Performance Assurance Oversight of Restart

### Restart Work

Is restart work being performed to proper standards?

Engineering  
Maintenance  
Operations  
Other

### SERB

Is the charter adequate?

Is the SERB effectively carrying out the charter?

### ROC

Is the charter adequate?

Is the ROC effectively carrying out the charter?

Integration of Reviews

Is the method of integrating reviews adequate?

Plant Equipment  
Human Resources  
Work Programs

### Startup and Power Ascension

Is it adequately Planned?

Is it adequately Scheduled?

Is it adequately Performed (Onshift Observations)?

<b>Restart Plan Revisions</b>		
<b>Revision Number</b>	<b>Description</b>	<b>Date</b>
1	Page 26: New page. Added Revision Block.	4/7/98
	Page 8 "Authorize Restart": Deleted Executive Vice President Nuclear Engineering. Added Executive Vice President Nuclear Generation.	
	Pages 20 and 21: Added reference numbers to restart criteria.	
2	Sect 1.3.5: Added Director Regulatory Affairs to SMRT	
	Attachment A: Added Preventive Maintenance Manager to SERB charter	
	Sect 1.3.10: Added Plant Performance Assurance responsibilities	
	Added Attachment F, Performance Assurance Oversight Of Restart	
	Index: Added Attachment F	
	Attachment C: Added "operability or regulatory" to level 1 screening. Added 5. Necessary to address regulatory commitments. Added "regulatory" to level 2 screening.	

