COPY NO.___

ADMINISTRATIVE PROCEDURE NO. 9

REVISION NO. 8

CONTROL OF STATION MAINTENANCE

APPROVED:

3 date

General Manager 2 Salem Operations

8303160624 830314 PDR ADOCK 05000272 S PDR

Significant changes to AP-9

agraph

8.2.6.h

8.2.6.i

8.2.6.k 8.2.7 8.3.1.d Requires QA review for proper classification of non-safety Removed the requirement to separate the white and yellow copies of the work order before starting the job. This will allow those departments utilizing computer tracking/listing to handle the actual routing of the white and yellow copies in any manner desired within their departmental procedures. The Supervisor responsible for completion is tasked with ensuring that a comprehensive description is provided on the work order form. This change will meet the intent of the procedure and still provide sufficient latitude for individualized routing and handling of the work order within each department.

Requires the supervisor or planner to contact the Sponsor Engineer when equipment or systems do not appear on the MEL

or any clarification of the classification is required.

8.3.1e Requires second verification of QA review of classification prior to starting work.

Attachment 1 RAMPS codes entries in blocks 7 & 8 are now required by the initiator and the reviewer.

A general location of the problem is now required by the initiator of the work order.

Repair code entry from attachment 3 required by the reviewer.

Steps 17, 17a, b, and c require QA verification of proper safety related classification and a QC stamp to be placed in the Special Insructions block of the work order.

Attachment 3

Priority code A clarified: Requires degradation of a safety-related system to require maintenance within a <u>short period of time</u>, and not a blanket requirement for any degradation of a safety related system to be automatically assigned an A priority.

1

Removed the word "major" from the security and fire systems. "Major" was not difinitive. Now reads: "loss of the fire protection or security systems"

Added Priority code E to delineate those I.O. and scheduled preventive maintenance items which require a unit outage to perform. (At present the RAMPS printout of overdue and open workorders shows over 6000 open orders, and the report indicates a large percentage of preventive maintenance work orders open when they are actualy pending a unit outage to perform. It is felt that the addition of another code will give management a tool for evaluation of the workorder status which is more informative.

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Attachment 4

Made new flow chart for workorder routing.



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ADMINISTRATIVE PROCEDURES SALEM GENERATING STATION ADMINISTRATIVE PROCEDURE NO. 9 CONTROL OF STATION MAINTENANCE

1.0 PURPOSE

This procedure describes the program for corrective action and preventive maintenance and for implementing modifications applicable to all station structures, systems and components, including: identifying, planning, establishing priorities, authorizing, scheduling, assigning, performing and documenting these activities.

2.0 <u>SCOPE</u>

This procedure shall apply to all maintenance activities and implementation of design modifications on station structures, systems and components. Design Change Requests (DCR's) will be processed in accordance with AP-8, Design Change, Test and Experiment Program.

Daily job assignments (i.e., sweeping of floors, chemistry analyses and decontamination activities) are not within the scope of this program.

3.0 DEFINITIONS

- 3.1 <u>Corrective Maintenance</u> Maintenance performed to restore structures, systems and components to their original design capabilities. Design Changes, Tests or Experiments shall be considered part of this category.
- 3.2 <u>Preventive Maintenance</u> Maintenance performed to prevent or reduce the need for corrective maintenance. Technical Specification surveillance shall be considered part of this category.
- 3.3 <u>Inspection</u> Examinations, observations or measurements performed to determine the conformance of materials, supplies, components, parts, appurtenances, systems, procedures or structures to predetermined quality requirements.

4.0 PROCEDURES

4.1 Maintenance that can affect the performance of safety related equipment shall be performed in accordance with written and approved procedures. Appropriate sections of related vendor manuals, equipment operating and maintenance instructions, or drawings may supplement the procedure.

4.2 When performing a task which requires a written procedure, the procedure shall be present, unless the job is of a simple or repetitive nature, and followed step-by-step while the task is being performed. Prior to commencing the work the person(s) involved with the work should review the procedure beforehand and be familiar with each step and the sequence of work. Step-by-step adherence is required where the procedure has been developed for extensive jobs where reliance on memory cannot be trusted, or for tasks in which every step must be performed in a specified sequence. Procedural steps shall have been committed to memory when such steps describe immediate actions which might need to be taken as conditions require. The steps required to be memorized should be highlighted in the procedure.

NOTE

Skills normally possessed by qualified personnel may not require a detailed step-by-step procedure

4.3 Procedures should contain:

4.3.1 Title

4.3.2 The Safety Related/QA Classification from the Master Equipment List (MEL).

NOTE

- For those items not addressed in the MEL, consult the appropriate Sponsor Engineer for classification
- 4.3.3 Purpose intent of the procedure.
- 4.3.4 References documents used to develop the procedure, including Technical Specifications.
 - 4.3.5 Prerequisites Actions and/or procedures that shall be completed and plant conditions that shall exist prior to its use.
- 4.3.6 Precautions Measures that should be taken to protect equipment and personnel, including the public. Cautionary notes applicable to specific steps shall be included in the main body of the procedure.
- 4.3.7 Limitations and actions Limitations on the parameters being controlled and corrective measures to return the parameter to normal.
- 4.3.8 Special tools
- 4.3.9 **Main body** Step-by-step instructions necessary for performing the task.

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- 4.3.10 Supervisor Witness and Inspection Hold Points (Attachment 2).
 - a) Supervisor witness points shall be located at sufficient steps to insure proper completion of the maintenance and to ensure accurate data aquisition.
- 4.3.11 Acceptance Criteria Requirements that must be satisfied for successful completion.
- 4.3.12 Retest Requirements Post maintenance checkout and testing.
- 4.3.13 Check-off lists
- 4.3.14 Data Sheet Record of all relative quantitative data.
- 4.4 Procedure Revisions
 - 4.4.1 On-the-spot changes shall be made in accordance with the appropriate department instructions and AP-3, Document Control.
 - 4.4.2 Personnel are authorized to depart from approved procedures when necessary to prevent injury to personnel or damage to equipment.
 - 4.4.3 When a procedure specified on the work order to be used in performance of the task is found to not be required, the supervisor shall cross out the procedure number using a single line and initial the cross out.

4.4.4 Design changes will be in accordance with AP-8, Design Change, Test and Experiment Program.

5.0 INSPECTION

- 5.1 The Station Quality Assurance Engineer (SQAE) shall be notified of all safety-related and QA required work. The stamp, initials or name of the inspector on the work order and on the applicable procedure signifies the activity was observed and found acceptable or nonconformances are noted.
- 5.2 Engineering will designate Design Change Requests (DCR's) that require inspection for non-safety related activities in plant areas which contain safety related systems.
- 5.3 The department preparing a procedure shall include Supervisor Witness Points and Inspection Hold Points as necessary to ensure desired results have been achieved. Identification of Inspection Hold Points shall include but not be limited to the requirements of Attachment 2

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5.4 Safety related and/or QA required work procedures shall be submitted to the SQAE for review to ensure that the inspection activity is appropriate to the task being performed. The SQAE may add additional Inspection Hold Points to the procedure or may wave the performance of certain Hold Points.

6.0 <u>CLEANLINESS</u>

- 6.1 The department or contractor performing the work shall be responsible for maintaining the appropriate area and system cleanliness requirements per AP-21, Mechanical System Cleanliness Program.
- 6.2 When entry is required into a system where the presence of foreign material is intolerable, measures shall be taken by the supervisor or contractor responsible for the work to prevent the entry of extraneous material. Lanyards should be utilized to prevent tools from falling into a system or component.
- 6.3 The exterior surfaces of stainless steel components may become contaminated with foreign matter during normal operations due to rework, repair, modification, testing, or examination. The responsible supervisor shall determine when a component shall be cleaned and examined for chloride and/or flouride content. Examination for chloride and/or flouride content, when required, shall be performed in accordance with AP-21, Mechanical System Cleanliness Program.

7.0 INSPECTION ORDERS

Preventive maintenance completed in accordance with AP-10, Inspection Order System, must also meet the requirements of the procedure except that a work order is not required.

8.0 WORK ORDERS

8.1 Initiation

All personnel shall immediately notify their supervisor when equipment malfunctions are discovered. Supervisors shall evaluate the situation and, if warranted, notify the Senior Shift Supervisor.

- 8.1.1 Any senior supervisor or supervisor may initiate a work order.
- 8.1.2 The Station Planning Department shall initiate work orders for the implementation of DCPs.
- 8.1.3 All departments shall maintain a record of the status of work orders initiated by the department. The record shall include the following:

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- a) Work order number
- b) Date initiated
- c) Department or contractor issued to
- d) Equipment involved
- e) Status (work order pending, in progress, completed)
- 8.1.4 The initiating department shall complete the appropriate sections per Attachment 1.
- 8.1.5 The gold copy of the work order should be retained by the initiating department. The other three (3) copies shall be forwarded to the initiator's department head.
- 8.1.6 The department head or designee shall approve or reject the work order.
 - a) For DCPs to be implemented by a contractor, both the Station Planning Engineer and the department head responsible for the work activity shall approve the work order for implementation.
 - b) If rejected, the work order shall be returned to the initiator for removal from the departmental file.
- 8.2 Scheduling and planning
 - 8.2.1 Maintenance shall be scheduled and planned so as not to jeopardize the safety of the reactor. Planning shall consider the possible safety consequences of concurrent or sequential maintenance, testing or operations activities. The Senior Shift Supervisor shall be kept informed of the plant status at all times.

Equipment required to be operable for the mode in which the reactor exists shall be available, and maintenence shall be performed in a manner such that no Technical Specification - Limiting Conditions for Operation are violated.

8.2.2 The department head, designee or contractor responsible for performing the work shall acknowledge receipt of the work order. In addition, for Nuclear Construction Support (NCS) administered contractor activities, the NCS Project Construction Manager or his designee shall also sign for receipt of the work order.

- 8.2.3 The pink copy of the work order shall be forwarded to the Station Planning Engineer.
- 8.2.4 The station Planning Engineer shall obtain the necessary information and forward the pink copy to the Office Supervisor for entry into the RAMPS System.
- 8.2.5 The Office Supervisor shall obtain the necessary information and file the pink copy.
- 8.2.6 Senior department supervisors, supervisors or planning coordinators shall:
 - a) Complete the review section of the work order.
 - b) Prepare work packages as applicable.
 - c) Ensure that proper cleanliness, tool control and retest requirements are specified.
 - d) Consider the potential radiation exposure and initiate the appropriate radiological controls per AP-24, Radiological Protection Program.
 - e) Ensure the supervisor/contractor in charge of the work understands the inspection requirements.
 - f) Consider the security system and notify the Security Shift Sergeant to establish compensatory measures as required.
 - g) Consider the fire protection system and notify the Shift Support Supervisor and the Fire Protection Coordinator if required.
 - h) Determine the safety related/QA classification from the Master Equipment List. If the system or component is not on the MEL, or clarification is required, contact the Sponsor Engineer for the proper classification.
 - For those items determined to be non-safety related from the MEL, ensure that a member of the Quality Assurance department reviews the work order to verify the classification and affixes a Quality Control Inspection stamp to the work order in the special instructions block.
 - j) For all work orders classified as safety related or Quality Required, notify Quality Assurance.
- 8.2.7 The work order shall be given to the supervisor/contractor responsible for the work prior to starting the job.

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8.3 Implementation

- 8.3.1 Department supervisors or contractors receiving work orders shall:
 - a) Ensure personnel are aware of all the requirements.
 - b) Notify QA if safety related, security, fire protection or QA required block has been checked yes. Enter the name of the QA staff member contacted.
 - c) If fire protection system impairments are anticipated in conjunction with the work, submit a Fire Protection Impairment Permit Request to the Shift Support Supervisor in accordance with AP-25, Fire Protection Program. The request should be submitted at least 24 hours in advance of the anticipated impairment whenever possible.
 - d) The work order or a copy shall be given to the individual performing the work.
 - e) If work order has been classified as non-safety related, ensure that Quality Assurance has verified the classification prior to starting the work.
- 8.3.2 Prior to granting permission to start the activity the Senior Shift Supervisor shall:
 - a) Determine and take (if necessary) the required actions when a portion of a redundant safety system, fire protection system or security system is being degraded.
 - b) Consider the following in preparing equipment for maintenance: shutdown margin; method of emergency core cooling; establishment of a path for decay heat removal; temperature and pressure of the system; valves between work and hazardous material; venting, draining and flushing; entry into closed vessels, hazardous atmospheres; handling hazardous materials and eléctrical hazards.
 - c) Ensure the proper tagging controls have been implemented per AP-15, Safety Tagging Program.
 - d) Sign the work order granting permission to commence the activity.
- 8.3.3 When performing an activity or design change which requires written procedures, the procedures and DCP shall be present at the job site.

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- e) Ensure all safety related/QA required work packages receive a review by the Station QA staff.
- f) Forward the yellow copy to the Office Supervisor.
- g) Provide a copy of the completed work order to the Station Planning Department.
- 8.4.5 The Office Supervisor shall update the RAMPS program and forward the yellow copy to the initiating department.
- 8.4.6 The initiating department shall update their work order log and either retain the copies or discard in accordance with departmental desires/procedures.
- 8.4.7 The performing department shall transmit the white copy of all safety related work orders to the Technical Document Room (TDR) for document retention.
- 8.4.8 The Station Planning Department shall obtain the necessary information and return the white copy to the department that performed the work.

9.0 EQUIPMENT HISTORY FILE

- 9.1 Department heads shall establish procedures for the maintenance of an equipment history file for equipment designated safety related under their cognizance.
- 9.2 The equipment history file should contain:
 - 9.1.1 Work orders and associated documentation
 - 9.1.2 Traceability of spare parts
 - 9.1.3 Performance data
 - 9.1.4 Calibration data

11.0 <u>RECORDS</u>

The department completing the work order is responsible for ensuring all records are retained in accordance with AP-11, Record Retention Program. For test data separate of the work package, the department responsible for the retest shall submit the data to the TDR for retention. (See Section 8.4.3)

- 8.3.4 If temporary jumpers/lifted leads are utilized, a copy of form AP-13-1 shall be attached to the work order.
- 8.3.5 The person completing the work or the contractor's representative shall sign the "Completed BY".
- 8.4 Completion
 - 8.4.1 The responsible supervisor or contractor shall verify satisfactory completion of the activity and release the blocking tags if (applicable).

NOTE

DCPs shall be processed in accordance with AP-8, Design Change, Test and Experiment Program.

- 8.4.2 The Senior Shift Supervisor/Shift Supervisor or other responsible supervisor shall verify that tags are cleared and equipment is returned to normal and shall sign the applicable section of the work order. If a Fire Protection Impairment Permit has been issued, ensure that the permit is closed out and the Shift Support Supervisor has been notified of the return of the Fire Protection System.
- 8.4.3 The Senior Shift Supervisor/Shift Supervisor shall ensure all retest requirements have been completed satisfactorily.

NOTE

Test data which is separated from the work package shall be available for post-implementation review, if required, identified with the work order number, and retained in accordance with AP-11, Record Retention Program.

8.4.4 The Supervisor in charge of the activity shall:

- a) Retrieve and review the work package.
- b) Ensure that the description of work performed is legible and complete.
- c) Sign the work order.
- d) For work activity performed by a contractor, the department head responsible for the work activity shall approve the work order. In addition, for NCS administered contractor activity, the NCS Project Construction Manager or his designee shall also sign the work order.

ATTACHMENT 1

INSTRUCTIONS FOR FILLING OUT WORK ORDER FORM

The work order is a four copy form (#1 white, #2 yellow, #3 pink, #4 gold) All work orders shall be prenumbered with a six digit, nine hundred thousand series number. All departments initiating work orders shall enter a two letter department designator preceeding the prestamped number. Department designators are as follows:

- **OA** Office Supervisor
- MD Maintenance Department
- MT MIET Group
- **OD** Operations Department
- CH Technical Department Chemistry
- IC Technical Department I & C
- **RP** Radiation Protection Department
- RE Reactor Engineering
- SD Security Department
- **OP Station Planning Department**
- SR Storeroom
- QA Station Quality Assurance Department
- **CS** Nuclear Construction Support
- ST Technical Staff Group
- NR Nuclear Review Board
- SP Manager Nuclear Site Protection
- SM Manager Nuclear Site Maintenance
- NP Manager Nuclear Procurement and Material Control
- **OT Operational Test Group**

Other department designators may be initiated as necessary. These designators shall be authorized for use by an approved revision request (form AP-1-2) to AP-9. A formal revision to AP-9 is not required to add designators.

All safety-related and quality related <u>required</u> information is highlighted on the work order form by a blue background. This information shall be completed on all safety-related and/or QA required work orders.

1 - Preprinted

2 - Initiator

3 - Initiator

4 - Preprinted

5 - Initiator

SALEM shall be printed on all work order forms.

Enter unit number on which affected equipment is located (1, 2, 3 or common)

Enter appropriate two letter department designator.

Preprinted work order number.

Enter appropriate priority number according to Attachment 3.

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6 - Initiator

7 - Initiator

8 - Planning Coordinator

9 - Initiator

10 - Initiator

11 - Initiator

12 - Initiator

13 - Initiator

14 - Initiator's Department head or designee

15 - Initiator's department

16 - Implementing department

17 - Reviewer

17a- Reviewer

17b- Reviewer

Enter department which should perform the work requested.

Enter the appropriate RAMPS system code. (Attachment 5)

Enter appropriate RAMPS component code. (Attachment 5)

Enter identifying number, letter or name of equipment (e.g., 12MS167, #11 Charging Pump). Include physical location of equipment.

Describe the problem and work to be performed (e.g., valve leaks/work valve). Record design change number for work activity associated with design change requests. Provide the general location of the problem.

Enter, date work order initiated.

Sign name. (Station Planning Dept. Staff member for DCP's)

Future use.

Sign name approving the work order. For work activity to be performed by a contractor, the station department head responsible for the work shall also sign.

Enter date approved. Head or designee.

Sign name upon receipt of work order. For contractor representative NCS administered contract work activity, the NCS Project Construction Manager (or designee) shall also sign.

Enter safety classification from the Master Equipment List (MÉL).

If the equipment or system is not listed on the MEL, or if clarification is required, contact the Sponsor Engineer.

If work order is classified as non-safety related from the MEL, ensure that Quality Assurance verifies the classification before performing any work on the system or component.

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17c- QA Staff Member

- 18 Reviewer
- 19 Reviewer/Supervisor in charge
- 20 Reviewer/Supervisor in charge
- 21 Reviewer/Supervisor in charge
- 22 Reviewer/Supervisor in charge/designee
- 23 Supervisor in charge
- 24 Supervisor in charge/ planning coordinator/ QA staff member
- 25 Supervisor in charge
- 26 Reviewer
- 27 Supervisor/planning coordinator
- 28 Supervisor/planning coordinator
- 29 Supervisor/planning coordinator
- 30 Supervisor/planning coordiator

Review the classification and if in concurrence, affix a Quality Control Inspection stamp to the special instructions block (See step 24).

Enter QA required classification from the Master Equipment List.

Enter REP number when known.

Determines if security must be notified.

Determines if Fire Protection System is being degraded. And if impairment of the Fire Protection System is anticipated, submit a request for a Fire Protection Impairment Permit to the Shift Support Supervisor in accordance with AP-25, Fire Protection Program.

Reviewer determines if Shift Supervisor's permission is required. Obtains Senior Shift Supervisor's signature when job is started.

Enters name of QA staff member contacted and time and date of contact if applicable.

Any special instructions related to the work order, and a Quality Control Inspection stamp for non-safety related work orders.

Follow-up/retest or operational test required or department follow-up if desired.

Sign name.

Sign name.

Enter date work is planned to start.

Enter appropriate planning information.

Enter actual start date.

- 31 Supervisor in charge/ planning coordinator
- 32 Supervisor in charge
- 33 Supervisor in charge
- 34 Planning coordinator
- 35 Supervisor/planning coordinator
- 36 Supervisor/planning coordinator
- 37 Senior Shift Supervisor/ Shift Supervisor
- 38 Senior Shift Supervisor/ Shift Supervisor
- 39 Craftsman/Contractor Representative
- 40 NCS Project Construction Manager or designee
- 41 Senior Shift SUpervisor/ Shift Supervisor/ Responsible Supervisor
- 42 QA Staff Member
- 43 Supervisor in charge/ Craftsman/Contractor representative
- 44 Supervisor in charge/ Craftsman
- 45 Supervisor in charge/ craftsman

Enter name of supervisor in charge.

Enter DR numbers - if not applicable enter N/A.

Enter appropriate authorization and/or account numbers.

Enter appropriate repair code from Attachment 3.

Enter appropriate departmental procedure.

Enter number of actual manhours expended on the job.

Signature accepting item for service.

Signature designating who made decision as to incident status. If box 11 is not checked, enter N/A.

Signature of craftsman who performed the work or contractor representative responsible for the work and date work was completed.

Signature of NCS Project Construction Manager (or designee) upon completion of contractor work activities monitored by NCS. Enter date signed.

Signature of supervisor verifying retests have been satisfactorily completed

Stamp or signature of QA staff member performing surveillance or document review. Enter date signed.

Enter results of investigation, where applicable, and a brief description of the work performed; for work performed by the contractor, enter contractor work package number.

Enter description of spare parts actually used to complete the work.

Purchase order number/Q.C. number/folio number of safety related spare parts used.

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- Supervisor in charge/ Maintenance Engineer or designee

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Signature of supervisor in charge of work performed by station personnel, signature of Maintenance Manager or designee for work performed by the contractor. Enter date signed.

ATTACHMENT 2

INSPECTION HOLD POINT CRITERIA

Inspection Hold Points shall be designated for inspections or verifications performed on material or activities for the purpose of certifying or accepting material or performance based on pre-established values/criteria. This includes but is not limited to:

- 1. Weld fit-up on ASME Class 1 and Pressure boundary welds.
- 2. Visual and NDE on ASME Class 1, 2, and 3 Pressure Boundary welds as required by engineering specifications.
 - a. Root pass and final visual and NDE for Class 2 welds.
 - b. Final Visual and NDE for Class 2 welds.
 - c. Visual and random radiography on Class 3 welds greater than four inches.
- 3. Class B surface cleanliness prior to closing system.
 - a. Visual inspection prior to replacement of a pump casing, valve bonnet, handhole cover, manhole cover, etc.
 - b. Visual inspection prior to fit-up involving replacement or addition of piping or components.
 - c. Verification of Class B acceptance criteria following flushing.
- 4. Witness of Critical Testing including:
 - a. Hydrostatic and pneumatic test.
 - b. Tests performed subsequent to modification, rework, or repair of system for which Limiting Conditions for Operation (LCO) are defined in the Technical Specifications. This does not include leak rate testing on containment isolation valves.
 - c. Reactor trip and Engineered Safety Features initiation setting after adjustment.
- 5. Packaging and loading of radioactive material for shipment.
 - a. Visual inspection of package and contents to assure conformance with prescribed requirements.
 - b. Visual inspection of transport vehicle to assure conformance with prescribed equipment.
- 6. Final visual and NDE for non-code seismic I welds.

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- 7. Verification of pump internal clearances and coupling alignment on safety-related pumps as follows:
 - a. Verification of specified clearances on rotating components.
 - b. Verification of motor-to-pump alignment prior to assembly of the coupling.
- 8. Verification of control setting on motor operated valves.
- 9. Verification of bolt torque on pressure boundary couplings, foundations, and seismic restraints.
- 10. Verification that installation of safety-related cables complies with applicable requirements of the Cable Control System Manual. including:
 - a. Electrical isolation and physical separation criteria for redundant channels.
 - b. Cable pulling for compliance with approved procedures.
 - c. Verification of correct termination prior to energizing circuit.
- 11. Inspection of seals on fire boundary penetrations.
- 12. Verification of test prerequisites for critical tests identified in paragraph 4 above. Prerequisites include as applicable: proper tagging, environmental conditions, testing medium (i.e., air, calibrated measuring and test equipment and documentation of acceptable results of work completed).

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Attachment 3

WORK ORDER PRIORITIES AND REPAIR CODES

$\mathbf{A} - \underline{\mathbf{EMERGENCY}}$

- Degradation of safety related systems or equipment or equipment malfunction or failure that will jeopardize unit capacity if not restored to service in a <u>short period</u> of time.
- 2. Unit or equipment failure resulting in a direct loss of capacity (load reduction).
- 3. Loss of security or fire protection systems.

B - TO BEGIN AS SOON AS POSSIBLE

1. Equipment requiring repair before it forces a load reduction or unit shutdown.

Example: An off peak load repair to operating equipment, repacking of a critical valve, main BF pump seal leak (steam or lube oil), etc.

- 2. Equipment failure that results in a potential loss of capacity should a second failure occur.
- 3. Security or fire protection failure that results in a potential loss of system or equipment should a second failure occur.
- C+ <u>CONVENIENCE</u> (equipment related)

Any work that does not effect capacity or reliability.

- **R** <u>REQUIRED REPAIR</u> <u>NEXT UNSCHEDULED OUTAGE</u> (general designation)
 - R-1: A repair or modification that <u>must be completed</u> during the next unscheduled unit outage.

Example: A commitment item which has been deferred to the next unit outage.

E - OUTAGE REQUIRED PREVENTIVE MAINTENANCE

Any Inspection Order System and scheduled preventive maintenance items which can only be performed during a unit outage. This designation should be reviewed by the affected department heads prior to assignment of such a priority. Required plant conditions should be noted on the work order.

Example: Commitment - Primary System Cooldown -Mode 5 - 7 day duration required.

R-2: A repair or modification which requires a unit outage which may be considered depending upon the length of the outage, plant conditions and personnel availability.

Example: Leaking feedwater heater unit that cannot be isolated, packing leak or pump cannot be isolated, etc.

NOTE

This work will be divided into groupings showing plant conditions, location, duration of repair and work package status. Jobs will be scheduled based upon personnel availability and length of critical path work.

O - OUTAGE/OVERHAUL

Any work order planned to be done during scheduled (long or short term) unit outages.

O-1: "Commitment items"; <u>shall be done</u> prior to unit return to service.

- Example: Priority I design change requests.

NOTE

This priority should be reviewed with affected department head prior to assignment and so noted on the work order.

0-2: Jobs shall be worked but are not commitment items. <u>These jobs would be considered essential</u> and would extend an outage.

> Example: Turbine overhaul, major system repairs and priority II design change packages. Priority A work orders.

NOTE

Department head approval required to reduce this priority.

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0-3: Jobs which will be worked as personnel availability allows. These jobs could affect unit capacity and reliability. These jobs shall be scheduled such that the outage is not extended.

Example: Priority III design change packages, equipment inspection and repair work orders with B priority designation.

0-4: Jobs which will be scheduled as personnel become available but could be postponed and not impact unit availability.

Example: Priority IV design change requests.

0-5: Jobs which will not be scheduled unless specifically authorized by the department head. (Convienience jobs).

Example: Work orders with C priority at start of outage or jobs which take personnel away from 0-1 thru 0-4 and priority V design change requests.

P - <u>PREVENTIVE MAINTENANCE</u>

Any work to be done on a scheduled basis to include inspection orders and work memorandums.

S - SAFETY

Any work pertaining to the safety of personnel regardless of severity.

REPAIR CODES:

01 - REPLACED - To install a new or rebuilt part in place of one that failed.

Example: A new motor replaces one that failed.

To repair a faulty part and re-install it.

02 - REPAIRED -

Example: The faulty motor is removed, repaired, and placed back in service.

03 - MODIFIED - To make a change to a part that makes it different from the original installation.

Example: The motor shaft extension is modified using special coupling.

04 - INSPECTED - To check visually or with instrumentation. This is understood to be the primary reason for the outage.

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Example: The motor is inspected because of noisy operation, found to be working fine, and no repairs are made.

05 - TEST -

To remove equipment from service for testing.

Example: A boiler feed pump is taken out of service to test the brake.

06 - REMOVED -

- Seldom used. This code is used only when a piece of machinery is taken from the plant and not replaced.
- 07 CLEANED To remove from service for cleaning. This code is generally used for preventive maintenance outages such as preheater washing, condenser cleaning etc.
- 08 CALIBRATION To remove control equipment from service for calibration
- 09 LUBRICATED This code is used when the only work done was lubrication.
- 10 OTHER No repairs made. This code is used only where no repairs of any kind are made.
- 11 ADJUSTED -
- 12 ALIGNED -
- **13** FABRICATED -
- 14 MACHINED -
- 15 WELDED -



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- SECONDARY

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- 013 TURBINES (HP-LP) STATIONARY AND ROTATING ELEMENTS
- 014 _ TURBINE CONTROLS
- TURBINE VALVES 015
- 016 TURBINE LUBRICATING SYSTEM
- CIRCULATORS, SCREENS, CONDENSERS, VACUUM PUMPS 017
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- GENERATOR ROTATING AND STATIONARY ELEMENTS AND PROTECTION 019
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085	CVCS-PRIMARY MAKE-UP AND RECOVERY
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087	REACTOR CONTROL AND PROTECTION
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089	COMPONENT COOLING
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403	IRAVELING SUREENS
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800	ROOM COOLERS
801	FANS
802	AIR FILTRATION UNIT (HEPA, CHARCOAL)
803	CHILLERS (COMPRESSORS, CONDENSERS)
804	PUMPS AND MOTORS
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806	VALVES
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808	SURVEILLANCE AND INSPECTION
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Appendix J

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QA Instructions

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