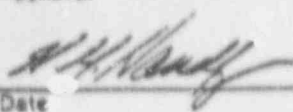


Approval

 Date
 12/5/89

Vogtle Electric Generating Plant
 NUCLEAR OPERATIONS



Georgia Power

Procedure No.
 20015-C
 Revision No.
 11
 Page No.
 1 of 18

PREVENTIVE MAINTENANCE

15

REV.	REASONS FOR REVISION	DATE
0	New Procedure	07/02/84
1	Incorporate Engineering comments	08/15/84
2	Incorporate Preoperational Maintenance requirements and equipment qualifications	08/06/85
3	Remove preoperational maintenance and include in SUM-25, add review process FSR PM	10/10/85
4	Clarified review duties for each reviewer, add Figure 2 and 2A, give detailed instructions for P.M.	06/01/86
5	Incorporate Maintenance Engineering comments and clarifications	10/17/86
6	Incorporate changes to Work Planning Group instructions	02/27/87
7	Incorporate commitments	10/05/87
8	Incorporate program enhancements per Q.A.	01/04/88
9	Incorporate Maintenance Engineering direction and clarifications	06/22/88
10	Complete rewrite of procedure Biennial Review per INPO (87) MA6.1	04/15/89
11	Complete rewrite of procedure program enhancements	

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1.0 PURPOSE

The purpose of this procedure is to describe Planned Maintenance administration and control to be implemented at Plant Vogtle. (Commitments 2497, 8571, 16400, 185, 15893, 12305, 13484, 12341, 5902, 5899, 1495, 193, 11276, 13189, 12163, 11930, 192, 2602, 3321, 2604, 50176, 2609, 2599, 1712, 7400, 2603, 8743, 6105, 6373, 7154, 7157, 7158, 7824, 10030, 10031, 12541, 14987, 15661)

2.0 DEFINITIONS

2.1 PREVENTIVE MAINTENANCE (PM)

Time dependent, condition dependent and trend/analytical task performance to assist in reducing unplanned outages, equipment failures and enhance Plant availability.

2.2 PREVENTIVE MAINTENANCE CHECKLIST/STANDARDIZED CHECKLIST (SCL)

A checklist with standard maintenance tasks to be performed on specific equipment tags to the equipment or equipment type (refer to Figure 3 for typical organization). A PM Checklist that provides standard maintenance tasks to be performed on a specific equipment tag. The SCL may be generic in nature in that it may apply to numerous, similar equipment tags.

NOTE

The PM Checklist is developed with the personnel who will perform the equipment maintenance in mind. It is intended to be a working tool for the individual performing the work but is not a replacement for a procedure for major overhauls or other detailed work. The checklist will generally inform the individual what needs to be done but may not give detailed instructions on what is needed to perform the task. The checklist may make reference to a specific procedure or other document as required for detailed instructions.

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2.3 PREVENTIVE MAINTENANCE REPETITIVE TASK FILE

A file in NPMIS developed for generation of PM MWOs.

2.4 PREVENTIVE-MAINTENANCE CHANGE REQUEST FORM (PMCR)

A document used to implement changes to improve the effectiveness of the PM Program. (Refer to Figure 2 for a typical format.)

2.5 MAJOR CHANGE OF A PM CHECKLIST

A major change is any change that would alter the scope or intent of the PM Checklist for example: revising a SCL class, revising the frequency of the SCL for a particular equipment tag, adding or deleting steps on a checklist and adding or deleting the applicability of an equipment tag to a SCL.

2.6 MINOR CHANGE OF A PM CHECKLIST

A minor change is any change that is not technical in nature and does not alter the scope or intent of the PM Checklist. Minor changes will not require revision change. The intent of the Minor Change process is to achieve proper documentation of minor, non-technical changes while allowing field or packaging work to continue. Examples are; correcting an incorrect reference procedure, revising a REP task for a time dependent PM and clarifying work instructions for checklist steps.

2.7 EQUIPMENT QUALIFICATION TASKS

Maintenance tasks identified in equipment qualification packages (EQDPs) that are required to maintain the equipment qualification. The EQDP revisions will be evaluated and incorporated into the Preventive Maintenance Checklists or Maintenance Procedures as necessary. (Reference Procedure 20009-C) (Commitments 7824, 10030)

2.8 PREVENTIVE MAINTENANCE PERIODICITY

Periodicity is the frequency at which time dependent PM tasks are scheduled to be performed or the suggested frequency for which the Condition Dependent PMs may be performed. The early and late date tolerances for performing required PM task are given in Figure 4.

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NOTE

The Due Date is the Late Date
for Equipment Qualification
Tasks.

2.9 TIME DEPENDENT (TD) (CLASS "C", "S", "E")

PM tasks that must be performed in order to satisfy a licensing or self-imposed requirement. These are identified in Figure 1. TD maintenance tasks will generate MWOs on a set frequency and will have late dates for performing the task.

2.10 CONDITION DEPENDENT (CD) (CLASS "A", "R")

PM tasks that are not required by a licensing requirement but are considered good maintenance practice. These tasks will have recommended frequencies but will not generate a MWO unless specifically requested, and will not have late dates. Although CD PMs will have a recommended periodicity, the actual periodicity will be determined by availability, i.e.,:

○System Outage
○Refuel Outage
○OPS Surveillance
○Manpower Limitations
○Containment Entry

○ALARA
○LCO Duration
○Power Deration
○Mode Related

2.11 TREND/ANALYTICAL TASKS

Not necessarily PM. Tasks performed by departments other than Maintenance such as Operation Rounds, Engineering Performance Monitoring, and Predictive Maintenance. This information should be analyzed with respect to the PM Program for periodicity adjustments and/or performance of more or less stringent PM tasks.

3.0 RESPONSIBILITIES

3.1 MAINTENANCE MANAGER

3.1.1 The Maintenance Manager or his designee will be responsible for the establishment and administration of PM activities. This will include but is not limited to the following:

- a. Review and approve major revisions to PM Checklists.

- b. Ensure program changes do not impact previous commitments. Review for potential deficiency in accordance with 00150-C.
- c. Approve, justify and extend late dates on Time Dependent PM MWOs not completed before the late date.
- d. Prioritize the CD tasks. Provide WPG with manpower allocations to perform PM's.

3.2 MANAGER OF OUTAGE AND PLANNING

3.2.1 The Manager of Outage and Planning or his designee will be responsible for the following:

- a. Monitor scheduling of PM's to ensure they are worked prior to the late date.
- b. Establish and administer the PM activities of the Work Planning Group (WPG).
- c. Maintain a close tie between Corrective and Preventive Maintenance to maintain CD (Class "A" and "R") PMs as current as possible.

3.3 MAINTENANCE SUPERVISOR

3.3.1 The Maintenance Supervisor will be responsible for the following:

- a. Perform technical review for major and minor PM change requests. (Block 7 of PMCR, Figure 2)
- b. Ensure the PM schedule is enforced for his/her respective discipline.

3.4 MAINTENANCE FOREMAN

3.4.1 The Maintenance Foreman will be responsible for the following:

- a. Resolve procedural and technical problems related to PM tasks, frequencies, and their performance.
- b. Should observe the performance of PM.
- c. Review and approve/disapprove the PM results as required as indicated by the PM Acceptance Form.
- d. Verify all necessary clearances to perform the scheduled PM.

- e. Notify the Work Planner of any discrepancies that may exist in the PM Work Package.

3.5 MAINTENANCE PERSONNEL

3.5.1 Maintenance personnel will be responsible for the following:

- a. Perform the PM Work Package.
- b. Document discrepancies in the PM tasks, schedules, or other abnormal conditions that may exist in Block 27 of the MWO.
- c. Verify that the equipment tag number, serial number, model number, type, etc., are correct and match the information on the checklist where applicable.
- d. Notify Maintenance Foreman of appropriateness of periodicity and adequacy of PM task, including work instructions.
- e. Complete the PM Acceptance Form for each SCD performed. (Figure 6)

3.6 MAINTENANCE ENGINEER

3.6.1 The Maintenance Engineer will be responsible for the following:

- a. Initiate and incorporate checklists for plant equipment.
- b. Trend PMs and recommend changes to enhance the effectiveness of the program.
- c. Review and approve major and minor PM change requests.
- d. Initiate and incorporate PM checklists for plant equipment.
- e. Ensure program changes do not impact previous commitments.
- f. Develop, control and implement the Repetitive Task File for Time Dependent type tasks as defined in Figure 1.

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3.6.2 MAINTENANCE PM COORDINATOR

- a. The Maintenance PM Coordinator will be responsible for the following:
- (1) Generate MWOs for Time Dependent tasks.
 - (2) Review and approve major and minor revisions to checklists for format and obvious errors.
 - (3) Maintain the Standardized Checklist file in NPMIS.
 - (4) Maintain a log and process change request forms.
 - (5) Transmit completed PMCRs to Document Control.

3.7 WORK PLANNING GROUP

3.7.1 The Work Planning/Scheduling Supervisor will be responsible for the following:

- a. Review and approve minor PM change requests. (Block 7)
- b. Schedule Time and Condition Dependent PMs.
- c. Ensure Foreman's PM Acceptance Form is issued with each SCL. (Figure 6)
- d. Provide adequate notification of scheduled maintenance to allow for department work assignment for all PMs.
- e. Print (dispatch) and package PM MWOs for CD tasks.
- f. Package PM WOs.
- g. Input the last performed date of each SCL for each applicable equipment tag number listed on the work order.
- h. Provide notification to Maintenance Engineering of any work that will prevent the completion of a Time Dependent PM.
- i. Review corrective MWOs and include any SCL's coming due that can be performed in conjunction with or in lieu of the identified work scope.

3.8 DOCUMENT CONTROL

3.8.1 Document Control will be responsible for the following:

- a. Maintain archives for approved PM Checklists and change requests.

NOTES

- a. The PM Program is not applicable to the equipment/instrumentation tasks covered by Technical Specification requirements or Fire Protection equipment.
- b. The PM Program is developed using various resources including, but not limited to, personal experience, vendor information, field validation and industry practice.
- c. Plant clearance procedures and operating practices will be observed prior to and during all PM activities, as required.

4.1 CHECKLIST REVISION VERIFICATION

4.1.1 If a replacement checklist is required for an MWO for which the original copy of the checklist has been lost, damaged, destroyed, or otherwise rendered unusable, the replacement copy must be verified as the latest revision.

4.1.2 MWOs that have replacement checklists added to them per Step 4.1.1 will be reviewed/revise, as applicable, in accordance with Procedure 00350-C.

4.2 CHANGES TO PM PROGRAM

4.2.1 Major Changes

- a. The initiator of any proposed change to a Time Dependent task will be responsible for ensuring that the applicable document or policy (i.e., EQDP, Commitment, Security requirement, etc.) requiring the task is changed to allow the PM change prior to submitting the PMCR.

- b. The initiator of the proposed change will complete Sections 2 through 6 of the PMCR and will mark up any existing checklist with the desired changes as applicable. The initiator will then submit the PMCR to their supervision.
- c. The Maintenance/WPG Supervisor or Maintenance Engineer will provide a technical review, and if approved, will sign Block 7 of the PMCR and forward to the PM Coordinator.

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If the PMCR is disapproved a copy will be returned to the originator, when possible, with the reason for disapproval.

- d. The PM Coordinator will review for format and other obvious errors, assign a PMCR log number (Example: 86-0001) and will sign in Block 8. Implementing documentation will be attached to the PMCR and submitted to the Maintenance Engineer and the Maintenance Superintendent and the Maintenance Manager for approval. The repetitive task file will be de-activated, as applicable, until the Maintenance Manager's approval has been obtained.
- e. The Maintenance Engineer or Maintenance Supervisor and the Maintenance Manager will review and approve/disapprove the PMCR.
- f. After approval of the major change, the PM Coordinator will implement changes to required tasks as defined in Figure 1.
- (1) If the change affects TD tasks, the PM Coordinator will correct the applicable repetitive task, as required, and will transmit the PMCR package to Document Control.
 - (2) If the change affects CD tasks, the PM Coordinator will transmit the PMCR package to Document Control.

NOTE

Major changes may be worked with pen and ink copies after approval of the PMCR form by the Maintenance Manager.

4.2.2 Minor Changes

NOTE

All changes to the repetitive task file affecting a Time Dependent tasks will require a Minor PMCR as a minimum.

- a. The originator will mark up a current PM Checklist as applicable with the desired changes. Changes are to be made with black ink by drawing a single line through each change and writing in the new wording. The originator will initial and date each change and will forward the checklist to their cognizant Foreman/Supervisor.
- b. The Foreman/Supervisor will initial and date each approved change.
- c. The Foreman will ensure that a copy of the checklist showing field changes is submitted to the PM Coordinator and will document this in Block 27 of any applicable MWO. A minor PMCR may be prepared at the option of the Foreman.
- d. If the PMCR is prepared, it shall be processed in accordance with Steps 4.2.1a through 4.2.1g with the exception that the Maintenance Manager's approval and the Impact Review blocks will be marked N/A.
- e. The Maintenance Engineer/Maintenance Supervisor will review and indicate approval/disapproval of all field changes and if disapproved, will generate a Deficiency Card or take other action as appropriate.
- f. The PM Coordinator will update the appropriate SCL.
- g. The PM Coordinator will ensure that all Minor changes are incorporated when a Major change is processed.

4.2.3 Other Changes

- a. Changes to the repetitive task file for Condition Dependent tasks that only affect grouping or scheduling do not require a PMCR. However, these changes should be evaluated by the responsible personnel for potential negative impact to the equipment, system, plant, etc.

4.3 DATE RESCHEDULING ON PM MWOs

4.3.1 To allow for outage and corrective maintenance actions, early scheduling of Time Dependent PM tasks may be approved by the WPG Supervisor. The responsible individual will also notify the PM Coordinator to adjust the data base, as necessary, for required type tasks. (Commitment 14987)

4.3.2 The PM Coordinator will be notified of any date extension on required type tasks and will adjust the repetitive task file as required. (Commitment 14987)

- a. The Maintenance Manager or designee is responsible for extending late dates on PM MWOs.
- b. A Deficiency Card will be initiated in accordance with Procedure 00150-C for Equipment Qualification tasks that are not completed by the due/late date. (Commitment 14987)

4.4 PRE-AUTHORIZED SCOPE EXPANSION

4.4.1 Maintenance activities can be expanded in accordance with the exemptions allowed by Procedure 00350-C. Any corrective action required to complete the Preventive task may be performed by appropriately revising the PM MWO per 00350-C. These actions will be considered Preventive; however, prior to revising the PM MWO a thorough search should be performed to identify any applicable outstanding Corrective MWOs.

4.5 FOREMAN'S PM ACCEPTANCE FORM

- 4.5.1 The person performing the PM SCL is to complete the Foreman's PM Acceptance Form (Figure 6) for all SCLs completed with a MWO.
- 4.5.2 The responsible foreman shall review the form revise the comments as necessary and sign indicating approval.
- 4.5.3 The WPG will forward the completed Acceptance Sheet to Maintenance Engineering for their evaluation.

4.6 VOIDING/DEFERRAL OF PM MWOs/SCL's

4.6.1 Maintenance Engineering may use the Maintenance Engineering Evaluation similar to Figure 5 to void or defer a PM or portion of a PM MWO.

4.6.2 Voiding of PM MWOs may be performed by other personnel
is accordance with Procedure 00350-C.

.. END OF PROCEDURE TEXT

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CLASSIFICATION OF STANDARDIZED CHECKLIST (Commitment 15661)

<u>CLASS</u>	<u>DESCRIPTION</u>
A	<p>NORMAL PREVENTIVE MAINTENANCE</p> <p>This is maintenance identified that should be performed on the subject equipment. These tasks are considered good maintenance practice and are based on vendor recommendation, industry standard, or industry experience.</p>
C	<p>COMMITMENT MAINTENANCE</p> <p>This is maintenance that is required by a plant commitment contained in the Commitment Tracking System.</p>
E	<p>EQDP REQUIRED MAINTENANCE</p> <p>This is maintenance that is listed in Section G of the Equipment Qualification Data Packages that must be performed to maintain qualification (operability) for the piece of equipment. This classification applies to both 10CFR50.49 equipment as well as equipment in a mild environment.</p>
R	<p>EQDP RECOMMENDED MAINTENANCE</p> <p>This is maintenance that is identified in Section G of the EQDP that the respective vendor recommends to be performed on a specific type of equipment. The performance or lack of performance of this type of maintenance does not render a component unqualified. This type of IM is to be performed on mild environment EQ equipment in lieu of component replacement.</p>
S	<p>SECURITY MAINTENANCE</p> <p>This is periodic maintenance that is performed on security system components to meet the intent of licensing requirements.</p>

-
- * Maintenance identified on Classes, C, E and S standardized checklists is considered to be required maintenance, that is to say Time Dependent.
 - * Maintenance identified on Classes A and R standardized checklists and maintenance identified on non-standardized type checklists should be considered to be good maintenance practice but is not required by plant commitments unless noted otherwise, that is to say Condition Dependent.

FIGURE 1

PLANNED MAINTENANCE CHANGE REQUEST

1. LOG NUMBER _____

2. [] MAJOR { } MINOR

3. CHECKLIST NUMBER _____ REV. _____

4. DESCRIPTION OF CHANGE _____

5. REASON FOR CHANGE _____

6. SUBMITTED BY _____ / /

7. MAINTENANCE/WPG SUPV.
OR MAINT. ENGINEER _____ / /
TECHNICAL REVIEW

8. PM COORDINATOR _____ / /
APPROVAL

9. MAINT. ENGR. _____ / /
APPROVAL

10. MAINTENANCE
MANAGER/SUPERINTENDENT _____ / /
APPROVAL

11. IMPACT REVIEW _____ WPG NOTIFIED _____

12. PM COMPUTER DATA BASE REVISED _____ / /

COMMENTS _____

FIGURE 2

EQUIPMENT MAINTENANCE CHECKLIST

MWO Number	Checklist	Page of
Tag Number	Reference Material	
Maintenance Requirements and Special Instructions		Skill and Initials

Maintenance Engineer/Supv. Approval _____ / REV. _____

FIGURE 3

MAINTENANCE ENGINEERING EVALUATION

LOG # _____

MWO # _____

SCL _____

TAG NUMBER _____

PROJ. CLASS _____

DESCRIPTION _____

ITEM TO BE EVALUATED _____

REQUESTED ACTION _____

REQUESTED BY _____

EXT. _____

EVALUATION _____

JUSTIFICATION _____

MAINTENANCE ENGINEER _____ /

MAIN. ENG. SUPERVISOR _____ /

FIGURE 5

PLANNED MAINTENANCE EARLY START/LATEST END DATE ALLOWANCE FOR
TIME DEPENDENT MAINTENANCE TASKS

<u>PM TASK FREQUENCY</u>	<u>ALLOWABLE DEVIATION FROM SCHEDULE</u>
Weekly	+/- 1 day
Monthly	+/- 7 days
3 Months	+/- 21 days
6 Months	+/- 42 days
12 Months	+/- 3 months
18 Months and over	+/- 4 months

EQDP PM tasks do not have a late date tolerance. The due date is the late date.

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FIGURE 4

FOREMAN'S PM ACCEPTANCE FORM

MWO:

STANDARDIZED CHECKLIST:

TAG:

1. WERE WORK INSTRUCTIONS ADEQUATE FOR TASK TO BE PERFORMED?
YES/ NO SUGGESTED ADDITIONS/DELETIONS TO INSTRUCTIONS
(INCLUDE MARKED UP SCL IF NECESSARY). _____

2. SHOULD THE SCL FREQUENCY BE LENGTHENED OR SHORTENED BASED ON
THE "AS FOUND" CONDITION THAT THE SCL ADDRESSED? EXAMPLES:
WAS THE INSTRUMENT TO BE CALIBRATED OUT OF CALIBRATION?
WERE THE ITEMS TO BE CLEANED, DIRTY? _____

3. DO YOU FEEL THERE IS SOME OTHER UNIDENTIFIED ACTIVITY THAT
MAY BE PERFORMED AS PART OF THIS SCL THAT MAY ENHANCE
EQUIPMENT PERFORMANCE OR EXTEND ITS USEFUL LIFE? ___Y/___N
IF SO, WHAT? _____

FOREMAN

DATE

PERSON PERFORMING WORK

DATE

FIGURE 6