ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER _____

PROCEDURE NO. A-601.6 REV. NO. 1

PROCEDURE CONTROL OF EMERGENCY AND ABNORMAL PROCEDURES

TECHNICAL REVIEW

PORC REVIEW DATE _____

_____
QUALITY ASSURANCE

_____
PLANT SUPERINTENDENT

_____
EFFECTIVE DATE

QA _____ NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 19 PAGES

A-601.6

PROCEDURE CONTROL - EMERGENCY AND ABNORMAL PROCEDURES

1.0 Purpose:

1.1 The purpose of this procedure is to establish a process for the revision and creation of Emergency and Abnormal Procedures (E, ES, ECA, F, FR and AP series).

2.0 References:

2.1 A502.1 Emergency and Abnormal Procedure Writers Guide.

2.2 A601.1 Procedure Control - New Procedures.

2.3 A601.2 Procedure Control - Permanent Changes.

2.4 A601.3 Procedure Control Temporary Changes.

2.5 EOP Procedure Generation Package.

2.6 Human Factors Manual.

3.0 Instructions:

3.1 PROCEDURE CHANGE INITIATION:

3.1.1 Changes to or initiation of new Emergency or Abnormal Procedures are initiated by submission of a PCN or a change request sheet (ATTACHMENT 1,) to the Operations Manager.

3.1.2 All relevant information pertaining to the procedure change should be included with the PCN or change request sheet. This will assist in the review process and insure proper documentation of the source of the change.

3.2 INITIAL PROCESSING:

3.2.1 Upon receiving a PCN or Change Request the Operations Manager, or designee, will review the proposed change and classify it as being "Major" or "Minor" and log the change sheet in the EOP/AP change master list.

3.2.1.1 The Operations Manager (or designee) will document the classification on the PCN or Change Request Sheet.

3.2.2 Major changes are those that effect the technical bases for the procedure, result in a major rearrangement of steps within the procedure, change the activities performed in step, alter the step logic, create or delete steps, impact human factors consideration, or create a new procedure.

3.2.3 Minor changes are those changes which are not major such as changing a setpoint number, correction of typo, or addition or deletion of information which does not alter the intent or logic of a step.

3.2.4 Minor changes will be reviewed as outlined in A601.2. Verification and validation review as outlined in this procedure are not necessary.

3.2.5 Major changes shall be reviewed by the verification and validation procedure outlined in section 3.3 and 3.4 of this procedure.

3.2.6 The Technical Assistant to the Operations Manager (TAOM) or Designee will prepare a draft procedure change to be used in verification and validation.

3.3 VERIFICATION PROCESS:

3.3.1 Verification is the review process that ensures the technical and written accuracy of a procedure and/or any subsequent change to a procedure.

3.3.1.2 Written accuracy is the incorporation of the following elements consistent with the Emergency and Abnormal Procedures Writers Guide, Reference 2.1 and accomplished utilizing the guidance of ATTACHMENT 2A:

a. Proper technical writing composition.

b. Accuracy and correctness of titles, terms.

c. Consistency.

d. Readability.

e. Operator acceptability.

3.3.1.3 Technical accuracy is the incorporation of, and/or compliance with appropriate technical information. The review should be made using guidance of ATTACHMENT 2B for comparison with the following:

a. Review against WOG-ERGs and deviations thereto

b. Licensing commitments

c. UFSAR and plant specific design

d Ginna Technical Specifications

e. Operating experience

f. Training/simulator feedback

g. Setpoint/footnote compliance

h. Human factors consideration (ie. man/machine interface)

3.3.2 Verification Performance:

3.3.2.1 The verification process shall be performed by pre-identifying the knowledgeable individuals needed to perform the reviews on ATTACHMENT 2.

3.3.2.2 Individuals performing the technical accuracy review, should include operations, STA, training staff, operations supervision, technical staff, nuclear engineering, etc., as deemed necessary by the Technical Assistant to the Operations manager or designee.

3.3.2.3 The Technical Assistant to the Operations Manager or designee shall perform the written accuracy review.

3.3.2.4 Deviation or changes to existing setpoints (footnotes) or new setpoints shall require review by technical staff and independent review by nuclear engineering. Included with the review shall be a documented basis, to include calculations or analysis, as applicable.

3.3.2.5 Deviations from the WOG-ERG guidance shall require review by knowledgeable licensed operations staff. Included shall be a documented basis which assesses the safety significance of the deviation.

3.3.3 Verification Documentation:

3.3.3.1 Verification shall be completed by documentation on ATTACHMENT 2.

3.3.3.2 The Technical Assistant to the Operations Manager or designee shall pre-identify the individuals needed to perform the technical review by name and asterisks on ATTACHMENT 2.

3.3.3.3 The Technical Assistant to the Operations Manager or designee shall document any deviations from the WOG ERGs or setpoint changes on ATTACHMENT 2, adding any additional pages as necessary. Included with any deviation shall be the justification and the safety significance of the difference from the WOG-ERGs.

NOTE: All comments must be resolved before the validation process is started. In the event a comment cannot be resolved the EPC shall review the proposed change and resolve the comment.

3.3.3.4 Following completion of the verification process, the Technical Assistant to the Operations manager or designee shall resolve any comments and followup with any further reviews, as necessary, and indicate resolution/completion by signature on ATTACHMENT 2.

3.4 VALIDATION PROCESS:

3.4.1 Validation in the process by which the useability of the procedure is confirmed.

3.4.1.1 Validation provides a means by which minimum operating shift personnel test the procedure and proposed changes in a plant specific control room environment under scenario driven, simulated emergency conditions.

3.4.1.2 Validation may be conducted by one of two methods; the simulator method or the walk through (tabletop) method.

3.4.1.3 Simulator validations will be utilized to the maximum extent possible on all procedures which affect action conducted in the Control Room.

3.4.1.4 Walk through validations will be utilized for operator actions which are conducted outside the Control Room or where the simulator lacks the capability to properly validate the procedure or change.

3.4.2 Scenario Development:

NOTE: Validation shall be performed on all major changes or new procedures.

3.4.2.1 The TAOM or designee shall develop a detailed event scenario using the final draft procedure after the verification process is completed. ATTACHMENT 3 provides a listing of scenarios.

3.4.2.2 For new procedures the scenario must contain sufficient guidance to place the plant in a cold shutdown or safe condition to ensure that all necessary transitions are accomplished.

3.4.2.3 For changes to existing procedure, the scenario shall be developed in such a manner that the step(s) changed are fully tested including RNO actions.

3.4.2.4 The TAOM or designee shall detail the scenario and the validation method to be used on the Validation Scenario sheet, ATTACHMENT 3A. For changes made as a result of simulator training feedback when using the procedures, the TAOM or designee shall consult the appropriate simulator instructor for scenario details.

3.4.3 Validation Performance:

NOTE: For changes to procedures as a result of simulator training feedback, the TAOM or designee shall ensure that the validation performance has been conducted and documented in accordance with steps 3.4.3.1 through 3.4.3.8.

3.4.3.1 For both simulator or walk through methods, the validation scenario shall be performed by the minimum control room complement of 3 licensed operators, with at least one being an SRO, and an STA.

3.4.3.2 The Validation Coordinator shall be either a SRO or a simulator instructor with SRO equivalent plant certification. The Validation Coordinator is normally the TAOM or designee.

3.4.3.3 Using the Validation Scenario Sheet, the Validation Coordinator shall brief the validation team in all the necessary initial conditions, systems and/or entry conditions to begin the validation. At no time shall the details of the scenario be made known to the validation team.

3.4.3.4 The Validation Coordinator shall direct the entire scenario performance, including any information necessary for operator decision making. Included shall be determination when the scenario has progressed sufficiently to effect termination.

3.4.3.5 The validation team will respond to the data available to them (simulator or walk through) and perform the actions of the procedure. The Validation Coordinator and simulator instructor shall observe the actions of the crew and assess their performance.

3.4.3.6 The Validation Coordinator may terminate the scenario when the scenario objective has been accomplished.

3.4.3.7 Immediately following conclusion of the scenario, the Validation Coordinator shall debrief the validation team using the applicable guidance contained in ATTACHMENT 3B, validation criteria.

3.4.3.8 The Validation Coordinator shall complete a Validation Performance Sheet, ATTACHMENT 3C, and record any comments for further evaluation/resolution. The TAOM or designee shall be responsible for resolution of comments prior to submittal of the change for final processing. Major changes as a result of comments shall require verification and revalidation.

3.4.3.9 The walk through (tabletop) validation method shall be conducted in a manner similar to the simulator (steps 3.4.3.1 through 3.4.3.8) except that no actual control manipulation will take place. However, the process used, time required and any necessary tools shall be factored into the task(s) required, for validity. Documentation shall be completed per Attachment 3C.

3.5 <u>Final Review, and Approval</u>:

3.5 Following validation and verification, the TAOM shall initiate a PCN for the procedure change or new procedure and initiate the required 10CRF50.59 review criteria as required by Reference 2.2 and 2.3.

4.0 **Records:**

4.1 Upon completion of the PORC review of the change the procedure package will be forwarded to Central Records with the PCN.

ROUTE TO OPERATIONS MANAGER

ATTACHMENT 1

CHANGE REQUEST NO.	PROCEDURE NO.	REV.

CHANGE/CLARIFICATION
REQUEST SHEET

#

CHANGE/CLARIFICATION REQUESTED:

REASON/JUSTIFICATION:

SUBMITTED BY:_____ REVIEWED BY:_____

ASSIGNED TO:_____

CHANGE CLASSIFICATION MAJOR ____ MINOR ____

DISPOSITION:

ATTACHMENT 2

CHANGE REQUEST NO.	PROCEDURE NO.	REV.

VERIFICATION DOCUMENTATION SHEET
(ATTACH DRAFT PROCEDURE AND JUSTIFICATION DOCUMENTATION)

GROUP/INDIVIDUAL	* FOR REVIEW	SIGNATURE
OPS MANAGER		
TA TO OPS MANAGER	*	
TECH ENG		
NUC ENG		
SHIFT SUPERVISOR		
STA		
OPS ASSESS		
OTHER		

COMMENTS:

ALL COMMENTS RESOLVED _____ _____
TAOM OR DESIGNEE DATE

ATTACHMENT 2A

VERIFICATION PROCESS

WRITTEN ACCURACY CRITERIA

REFER TO A-502.1:

1) Do the following pages exist in each EOP:

   a. Cover page

   b. Purpose and entry conditions/symptoms page

   c. Operator action step page

2) Does the procedure have all its pages in the correct order?

3) Does the procedure have the number of pages indicated?

4) Are page layouts consistent with the Writers Guide sample page format?

5) Does the cover page provide the following identification information?

   a. Title

   b. Procedure number

   c. Revision number

   d. Effective date

   e. Approval signature and date

   f. Number of pages

6) Does each page provide the following identification information?

   a. Procedure designator and number

   b. Title

   c. Revision number

   d. Page _____ of _____

7) Is the location of page identification information consistent?

ATTACHMENT 2A CONTINUED

8) Is the title descriptive of the procedure?

9) Is the purpose statement indicative of the purpose for which the procedure is applicable?

10) Are instruction steps number correctly?

11) Are operator action steps written tin short, concise steps which deal with only one idea?

12) Are the instructions typed in both upper and lower case letters as conventionally used as opposed to all upper case letters?

13) Are fixed sequence steps clearly distinguished from steps that do <u>not</u> have to be performed in a fixed sequence?

14) Are the methods of emphasis consistent and correct?

15) Are abbreviations and acronyms consistent?

16) Are operator actions specifically identified (open, turn, shut)?

17) Are objects of operator actions specifically stated?

18) If a step contains three or more objects of an action, are they listed and space provided for checkoff?

19) Are control settings and limits expressed quantitatively, e.g. 2 turns, 80 (75-85) gpm.

20) Do the instructions in the procedure meet all of the following criteria?

    a. Each item requiring alignment is individually specified. (It is not acceptable to refer personnel to previous steps.)

    b. Each item is identified with a unique number of nomenclature.

    c. The position in which the item is to be placed is specified.

21) Are cautions placed immediately ahead of the step(s) to which they apply?

ATTACHMENT 2A CONTINUED

22) Are cautions separate and easily distinguishable in appearance from instructional steps?

23) Can the test of a caution be read without interruption by page turning?

24) Do cautions avoid the use of operator action statements?

25) ARe notes placed immediately ahead of the step (s) to which they apply?

26) Are notes separate and easily distinguishable in appearance from instructional steps.

27) Can the test of a note be read without interruption by page turning?

28) Do notes avoid the use of operation action statements?

29) Are punctuation, spelling and capitalization correct?

30) Do operator action steps make proper use of logic terms and structure?

31) Are the titles and numbers of all reference documents identified correctly and consistently?

32) Are referencing instructions correctly worded?

    a. GO TO (transition to another or same EOP)

    b. REFER TO (branching to procedures other than EOP)

33) If calculations are required, is space provided in the procedure to perform the computations and to record the results?

34) Are graphs, tables and figures legible and readable?

35) Are titles of graphs, figures and tables descriptive of contents and use?

36) Are works not broken up (hyphenated) between lines or pages?

ATTACHMENT 2B

VERIFICATION PROCESS

TECHNICAL ACCURACY CRITERIA

Operations Area:

1) Are entry SYMPTOMS correct and complete?

2) Are referenced procedures (other than another EOP) complete and correct?

3) Are the given units and ranges of measurement the same as displayed on plant instruments?

4) Are control values and limits;

   a. Stated quantitatively where needed?

   b. Expressed within reading ability of the operator?

   c. Given as ranges as well as single values?

   d. Compatible with those in current use?

5) Is the location of not-commonly used equipment specified?

6) Is equipment identification identical to control board labels or identified using abbreviations which are familiar to the operator?

7) Can information or values be readily extracted from graphs, tables or figures?

8) Is the correct placement of multiposition switches or controls specified?

9) Are AUTOMATIC ACTIONS correct and complete?

10) If FOLDOUT page information sufficient and correct?

11) Are Control Room instruments and controls adequate to provide the necessary information, data and control as specified by the EOP?

12) Are operator actions complete and correct?

13) Are the expected results of operator actions complete and correct?

ATTACHMENT 2B CONTINUED

14) Are contingency actions correct and complete?

15) Are EOP exit conditions compatible with the entry conditions of a referenced procedure (other than another EOP)?

16) Do required calculations use values which are compatible with and readily available from plant data sources?

17) Do referenced procedures route users past important information?

18) Are Caution statements provided when displays are based on secondary sensing devices?

19) Are components (equipment, instruments, controls) identified completely and correctly?

20) Are graphs, tables and figures complete and correct?

21) Are recent plant modifications reflected in the EOP?

22) Are the step/actions consistent with the current revision of WOG-ERGs?

22A) If no, is deviation documented and safety-significance assessed with justification documented?

23) Have implemented licensing commitments applicable to EOPs been addressed?

24) Are differences between licensing commitments and EOP documented?

HUMAN FACTORS CONSIDERATIONS:

1) Does the change involve instrumentation or control changes?

If yes, consult the Human Factors manual for conformance to Human Factors guidelines for the following areas:

a) Displays - see section 9.0:

b) Controls - see section 8.0:

c) Controls/display location - see section 3.0:

ATTACHMENT 3

VALIDATION SCENARIOS

1. Loss of all AC power with stuck open S/G safety valve.
2. Spurious Rx trip with PRZR level transient.
3. Intermediate LOCA (4 inch).
4. Design Basis Accident - LOCA
5. Small break LOCA inside containment.
6. Small break LOCA - col leg (inadequate core cooling).
7. Secondary break outside containment with no AFW.
8. SGTR (about 400 gpm).
9. SGTR with subsequent secondary break.
10. SGTR with subsequent LOCA.
11. Loss of all AC power - no SI required.
12. ATWS from full power - S/G low low level with no trip.
13. LOCA outside containment.
14. SGTR without RCS pressure control.
15. Service Water rupture in containment with subsequent reactor trip.
16. Both MSIVs fail closed with subsequent secondary break.

ATTACHMENT 3A

VALIDATION SCENARIO

CHANGE REQUEST NO.	PROCEDURE NO.	REV.

TYPE OF VALIDATION REVIEW: SIMULATOR _____

WALK THROUGH _____

SCENARIO DETAILS:

COMPLETED BY: _____ _____

TAOM OR DESIGNEE DATE

ATTACHMENT 3B

VALIDATION CRITERIA

V1) Are procedures easily identified?

V2) Are procedure transitions made correctly
- o within a procedure?
- o to another EOP? ; at the correct step?
- o to another procedure not an EOP? ; at the correct step?

V3) Does any procedure or procedural step appear to cause confusion?

V4) Are there sufficient steps to complete and evolution?

V5) Do steps contain sufficient information?

V6) Is proper step sequence maintained?

V7) Are alternative actions (use of OR) explicit?

V8) Are contingency actions (RNO) sufficient?

V9) Are CAUTIONS and NOTES recognized and understood?

V10) Are internal procedure loops performed correctly?

V11) Is the FOLDOUT page used properly?

V12) Are Figures and Tables accurately readable?

V13) Are CSF Status Trees properly monitored and used?

V14) Are instruments and controls referenced by the EOPs available in the control room?

V15) Can instruments be read within the required reading accuracy?

V16) Are control room instruments and control sufficient to perform the step required by the EOP?

V17) Is the minimum control room staff sufficient to perform the required actions effectively?

V18) Is procedure nomenclature consistent with control room labeling and operator language?

ATTACHMENT 3C

VALIDATION PERFORMANCE

CHANGE REQUEST NO.	PROCEDURE NO.	REV.

VALIDATION COMMENT SHEET

VALIDATION PERSONNEL:

NAME	POSITION	SIGNATURE

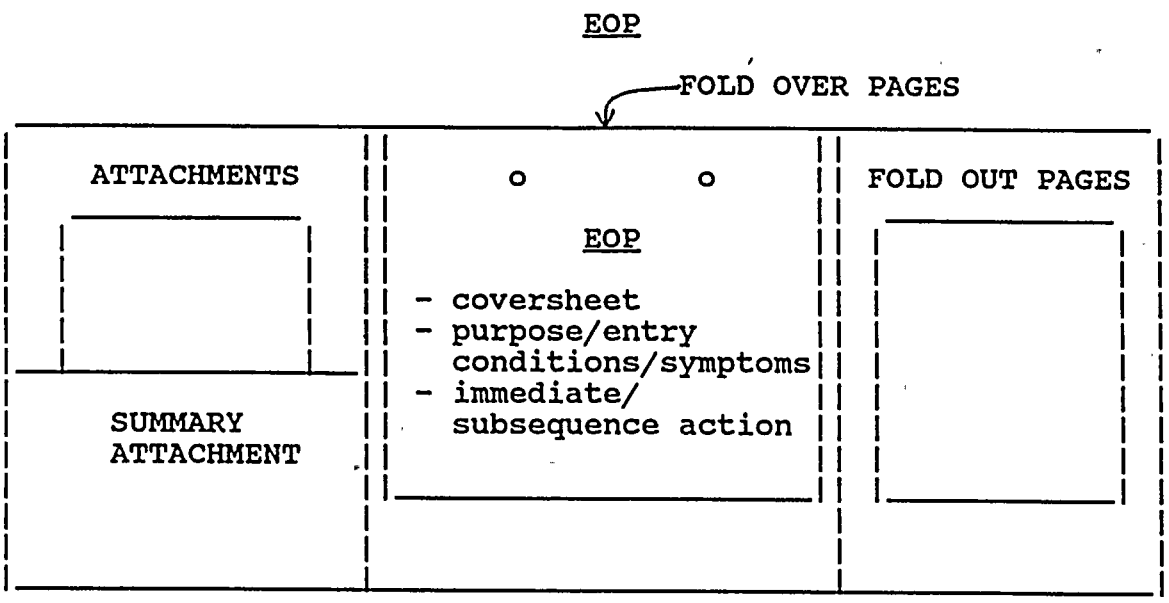
COMMENTS:

COMMENTS RESOLVED: _____ _____

TAOM OR DESIGNEE DATE

FIGURE 1

CONTROL ROOM EOP/AP BINDER ARRANGEMENT
(TRI-FOLD BINDER)



B1 - FOLD BINDER