Docket No. 50-336

Attachment No. 2

Millstone Nuclear Power Station, Unit No. 2

Emergency Operating Procedures
Generation Package
Revision 1

January, 1985

Table of Contents

1. INTRODUCTION

1.1 PURPOSE

The purpose of this Procedures Generation Package (PGP) is to describe the describe the emergency operating procedures (EOPs) upgrade at Millstone Unit 2.

1.2 SCOPE

This document was developed in response to Supplement 1 to NUREG-0737, Item 7.2b, page 15.

1.3 BACKGROUND

Item 1.C.1 of NUREG-0737 requires that EOPs be upgraded based on the lessons learned from the Three Mile Island accident. It specifies that operators be provided with directions to mitigate the consequences of a broad range of accidents and equipment failures, and that these directions be function, as well as event oriented. They should provide the operator with guidance on how to verify the adequacy of certain safety functions, and how to restore and maintain those functions when they are degraded. In this manner, the operator will not have to immediately diagnose an event, such as a small loss of primary coolant event, to maintain the plant in a safe configuration.

NNECo personnel have been actively participating for several years in a Combustion Engineering Owner's Group (CEOG) program to develop generic Emergency Procedure Guidelines (EPGs). This program has resulted in the analysis and reanalyses of many transients and accidents. The results of these analyses form the bases for the generic EPGs.

The generic EPGs were submitted to the NRC Staff in a report entitled, "Combustion Engineering Emergency Procedure Guidelines," CEN-152, Revision 1, dated November 22, 1982. This report contains the final emergency procedure guidelines, as description of the guideline characteristics and features, the methodology to develop and validate the guidelines, and information on implementation of the guidelines.

Reference 3.2 provided NRC Staff acceptance of the CEOG EPGs for implementation in plant-specific Emergency Pperating Procedures (EOPs) and identified technical and administrative issues which will require resolution in the future.

Using the generic EPGs contained in CEN-152, Revision 1 (Reference 3.3), and guidance developed by the industry Emergency Operating Procedures Implementation Assistance (EOPIA) Review Group EOPs will be upgraded via a four phase program. These phases are: (1) in preparation of a writer's guide and changes to the CEOG EPGs specifically for Millstone Unit No. 2, (2) procedure writing and verification, (3) validation, and (4) training. An overview of the EOP implementation process is depicted by Figure 4.1.

2. SUMMARY DESCRIPTION OF PROGRAM

This section provides a summary of the program for upgrading Emergency Operating Procedures at Millstone Unit 2 based on Combustion Engineering Owner's Group (CEOG) guidelines.

2.1 INITIAL CONSIDERATIONS

a. Procedure Network

EOPs are only one of the many types of instructions within the plant's procedure network system. Their relationship to each other and other plant procedures is called the procedures network. This network is considered by the Project Team during EOP upgrade to ensure continuity of the EOPs with the supporting plant and system procedures. Where necessary, changes to existing procedures are recommended and processed as part of this program.

For purposes of EOPs, an emergency event is distinguished from other plant operations by virtue of its severity: it should be sufficiently severe that a reactor trip is either activated or required immediately to properly mitigate the event. There is

another less severe class of events for which a reactor trip is not required, but if left unattended could eventually challenge safety functions. A new set of procedures will be created to address this later class, called abnormal operating procedures. Figure 4.2 depicts the distinction between emergency and abnormal procedures. This procedure set will include some procedures which were previously designated at emergency procedures. Events that are more serious than normal transient but not severe enough to warrant an immediate Reactor Shutdown will be included here.

b. Shift Staffing

The EOPs must be structured so that the number of people required to carry out the specified actions do not exceed the minimum shift staffing required by the Technical Specifications. The following staffing level is assumed in the EOP Upgrade Program:

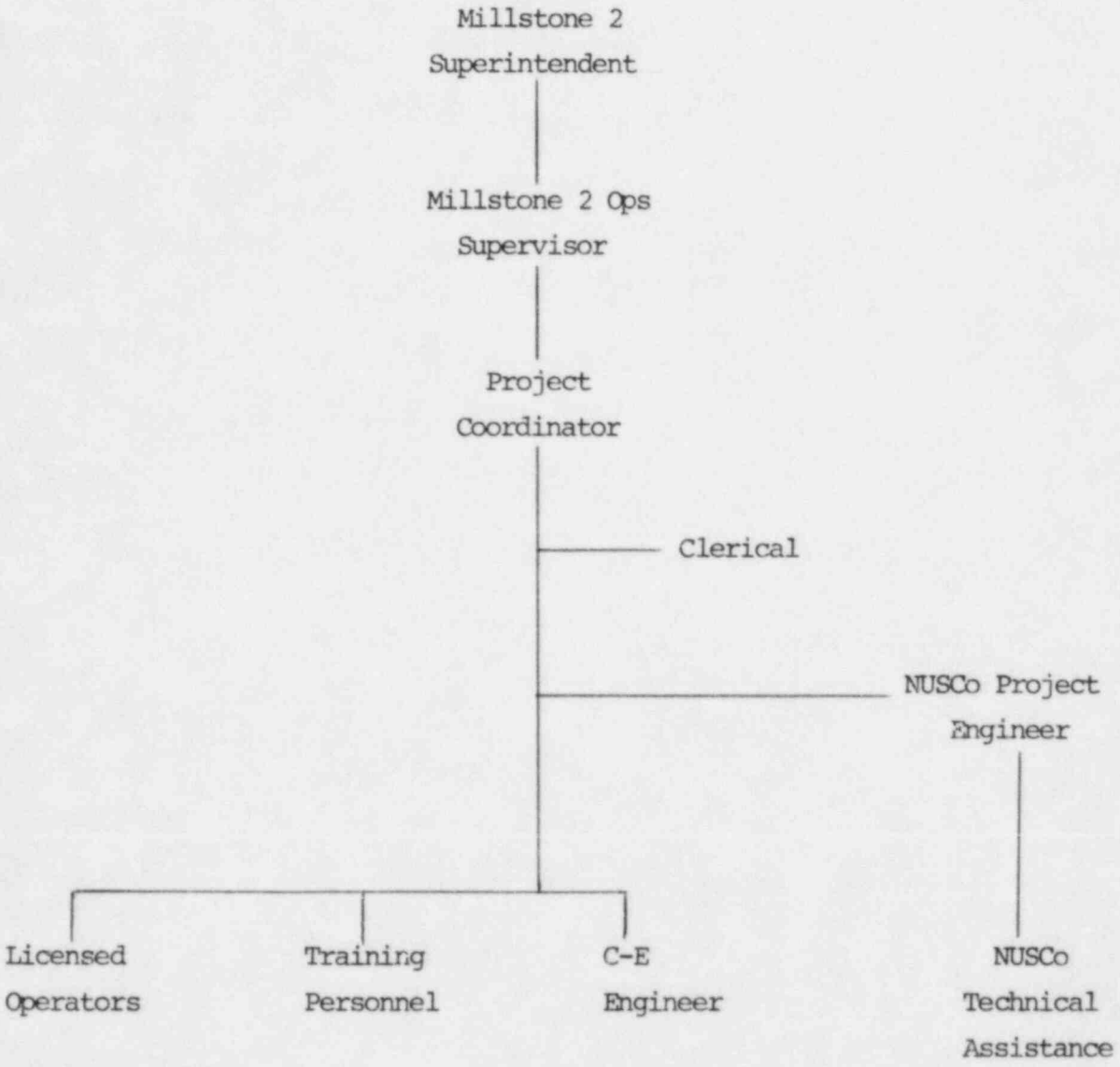
- One Shift Supervisor (SRO/STA qualified)
- One Supervising Control Operator (SRO)
- Two Control Operator (RO)
- Three Plant Equipment Operators
- One HP Technician
- One Chemistry Technician and other Emergency Plan personnel as appropriate

c. Plant Modifications

As part of the EOP Upgrade Program, it is necessary to ensure that the EOPs reflect plant modifications that are made up to and during the 1983 outage.

2.2 PROJECT TEAM

The new EOPs are prepared and implemented by a project team called the Millstone 2 EOP Upgrade Project Team. The organization of the project team is depicted below.



2.3 PLANT SPECIFIC TECHNICAL GUIDELINES

Because of the similarity between Millstone Unit 2 and the generic plant used in the Combustion Engineering Owners' Group (CEOG) guidelines, Millstone Unit 2 will use the generic guidelines to upgrade existing plant emergency procedures. This section describes the process that will be used. The CEOG EPGs and the other source documents indicated below constitute the plant specific technical guidelines required by Reference 3.1.

a. Source Documents

EOP writers will use the following source documents to prepare upgraded EOPs.

- EOP Writers Guide
- CEOG Emergency Procedure Guidelines
- Technical Specifications
- Existing Emergency Procedures
- FSAR
- Licensing commitment letters related to EOPs
- Administrative Control Procedures

b. Draft EOPs

The EOP writer will review the source documents and then construct draft EOPs using the following additional guidance.

- If it is determined that a generic step is compatible with Millstone 2, then the step will be copied into the EOPs using the appropriate format instruction.

- When a generic step requires a plant specific value, it will be determined and put into the EOP.

- When a generic step indicates the need for plant-specific details, then the information will be added to the EOPs.

- When the generic guidelines fail to address systems or actions that are unique to Millstone 2, then steps will be included to encompass the necessary actions.

- If a generic step specifies an action that cannot be performed at Millstone Unit 2, then the step will be deleted or modified.

- Generic steps will be reworded to conform to Millstone Unit 2 standard terminology.

- Generic steps may be rearranged to streamline the procedure provided the technical intent remains unchanged.

c. Final EOPs

After the draft EOPs are prepared, verification and validation processes will be performed as described in the following sections. At the conclusion of the verification and validation, operators are trained and the EOPs will be approved and implemented. Revisions will be processed as required in accordance with administrative control procedures.

2.4 WRITERS GUIDE FOR EOPs

A writers guide for EOPs is a plant-specific document that provides instructions on writing EOPs. In addition to establishing sound procedure writing principles, the guide helps to promote consistency among all EOPs and their revisions, independent of the number of EOP writers. The Millstone Unit 2 Writers Guide for Emergency Operating Procedures is based on the industry document Emergency Operating Procedures Writing Guideline (INPO 82-017), developed by the Emergency Operating Procedures Implementation Assistance (EOPIA) Review Group and published by INPO. This writers guide will be added to ACP-QA-3.02, Station Procedures and Forms, as Attachment B when the EOPs are implemented.

The concepts presented in the writer's guide were closely followed during the preparation of upgraded EOPs. The Writers Guide will be revised, as necessary, based on feedback from procedure writing experience validation, training, and operating experience.

2.5 EOP VERIFICATION PROGRAM

EOP verification is the evaluation performed to confirm the written correctness of the procedure and to ensure that applicable generic and plant-specific technical information has been incorporated properly. This evaluation also checks that the human factors aspects presented in the writers guide have been applied.

Initial EOP verification is accomplished by completing all the elements described below.

a. Operations Review

The EOP's will be made available to Department Heads, Training, and each operations shift for review. The purpose of this review is to give the upgraded draft EOPs the broadest possible exposure to the licensed operators and staff prior to subsequent training and implementation. This review consists of providing copies of the draft upgraded EOPs to the licensed operator requalification classes and training staff for their discussion and comment. A review/comment sheet will be provided to collect and respond to comments. Refer to Figure 4.3.

b. EOP Verification Checklist

An EOP verification checklist is used to ensure that the EOP conform to certain human factors principles and represent a degree of consistency in presentation of the written material. Figure 4.4 provides an EOP verification checklist. The checklist is used as an aid to the EOP reviewer in performing his review.

c. Table Top Review

Each EOP is thoroughly discussed by a group of operators, engineers and trainers. Each EOP is thoroughly discussed by the EOP project team with the purpose of coming to a consensus on the adequacy and accuracy of the EOP. The EOP project team consisted of licensed plant operators, engineers and licensed training staff personnel.

d. Control Room Walkthrough

Each EOP will be walked through the control room to ensure compatibility with existing control room indications.

e. Plant Operations Review Committee (PORC)

The EOPs will be reviewed and approved by the PORC in accordance with Administrative Control Procedure, ACP-QA-1.04, PORC.

f. Safety Analysis Review

Selected EOPs will be reviewed by Northeast Utilities Safety Analysis Branch in accordance with Nuclear Engineering and Operations Procedure NEO 3.12, Safety Evaluations.

g. Resolution of Discrepancies

Any discrepancy is corrected and incorporated in the next draft of the EOP. The project coordinator is responsible for ensuring that these are resolved. He reports directly to the Operation Supervisor.

2.6 EOP VALIDATION PROGRAM

The objective of EOP validation is to determine that the actions specified in the procedure can be performed by the operator to manage emergency conditions effectively. The methodology for EOP validation utilizes present available methods. The EOP validation will evaluate the operators' ability to manage emergency conditions using the EOPs.

The validation program described here outlines the process used to confirm the actions specified in the EOPs can be performed by plant operators to manage emergency conditions.

The upgraded EOP Validation consisted of two phases, Initial Validation of Draft Upgraded EOPs and Final Operator Evaluation.

Initial Validation of Draft Upgraded EOPS

This part of the validation program had the following objectives:

- To identify those areas of the draft upgraded EOPs that are difficult for the operating shift to use or understand.

- To provide feedback from the operating shift personnel.

- To identify upgraded EOP training needs. These needs are those of operators who had been trained on existing EOPs and had not been trained on the draft upgraded EOPs.

- To demonstrate that the draft upgraded EOPs can be used to manage emergency conditions effectively.

The following methods were used:

- Designate Observe/Review Team and Operator Personnel

  The Project Coordinator will designate personnel to participate in the initial validation of draft upgraded EOPs. The EOPs will be exercised by an operations crew consisting of a Shift Supervisor (SRO and STA qualified), a Supervising Control Operator (SRO) a Primary Plant Operator and a Secondary Plant Operator (Both RO licensed). The exercises were observed by members of the EOP Project Team and with additional support from two staff SRO licensed personnel (both not directly involved with the upgraded EOP program).

- Selected Scenario Selection

  Scenarios were selected with the assistance to the CE simulator instructor criteria for selection included:

  a. Exercise as much of each draft upgraded EOP as possible.

b. Remain within the operating capabilities of the simulator.

c. Exercise the draft upgraded EOPs on two events at the same time. For example Loss of Primary Coolant and Steam Generator Tube Rupture, Excess Steam Demand and Steam Generator Tube Rupture, etc.

° Performance Review

At the end of each scenario a review session was held to gather comments. These comments were red-lined directly onto the draft upgraded EOPs. Additional notes were taken as to training needs. After the validation session, these comments are resolved by the EOP Project Team.

Final Operator EOP Evaluation

As part of the training program more extensive simulator exercise of the updated EOPs takes place. During the training exercises as additional comments/concerns were raised, they were fed back to the EOP project team to be considered and included, if appropriate, in the implemented version of the upgraded EOPs.

During the final training session the Operators are evaluated on their ability to use the procedures to successfully manage emergency conditions effectively.

This evaluation is made by the training department personnel and an additional staff license and is documented. (see Figure 4.5)

Simulator - Plant Differences

Differences between the design of CE Training Simulator and the Millstone 2 Control Room are to be discussed at the beginning of the validation session. For those sections of the upgraded EOPs that address areas different from the simulator, the control room walk-through and table top review provides the method by which the upgraded EOP is judged usable.

Final EOP Revisions

Specific major revision to the upgraded EOPs occurring after implementation may require additional verification/validation. The Operations Supervisor will determine the need for and scope of any follow-up V&V efforts.

2.7 EOP TRAINING PROGRAM

The EOP format requires that the operator have a significant knowledge level based on experience and specific training on the use of the EOPs. As part of the EOP Upgrade Project, a bases document will be developed for each EOP which includes specific information which must be learned in order to use the EOPs. The bases includes information from the CEOG EPG training material modified with Millstone Unit 2 specific information. The bases will be primary reference for development of training materials.

The training program described herein is comprised of both classroom and simulator training.

The training program has four major objectives:

(1) To enable the operator to understand the structure and format of all EOPs.

(2) To enable the operator to understand the technical bases of all EOPs.

(3) To enable the operator to understand how all EOPs ensure that safety functions are satisfied.

(4) To give the operator experience in using all EOPs under simulated control room conditions.

The training process can be divided into the following areas. In each area training is presented to the operations staff one shift at a time. This emphasizes the team approach of each shift and reinforces operator roles.

a. Awareness and Involvement in the Upgrade Process

During operator requalification training in 1983 the EOP upgrade program progress will be discussed and draft procedures will be reviewed and critiqued.

This approach of using the training shift to get operator review and feedback as well as training on the upgraded EOPs kept the license personnel involved in the process of implementing and maintaining effective EOPs.

b. Individual Study and Review

Prior to classroom presentation, each EOP will be reviewed by the licensed operator.

c. Classroom Presentation and Discussion

Instruction will be given on:

a. Use of the new format
b. Standard post trip actions
c. Each event specific EOP
d. When and how to use the functional EOP

d. Simulator Instruction

Use of the simulator will provide each operator the "hands on" experience of using all the EOP under control room operating conditions. This allows the operator to observe the effects of various actions and non-actions. Initial upgraded EOP training was performed on the C-E training simulator. Differences between the simulator and MP2 are discussed at the beginning of each simulator portion of the training. NNECo is building plant specific simulators to be used in future operator training. Scenarios are selected which provided the widest possible exposure of the operator to the EOPs. Scenarios are manipulated to provide the maximum EOP training benefit.

e. Examination

Tests will be administered to check that the necessary information has been learned. This will include:

i. Written examination at the conclusion of classroom presentation.

ii. Operating evaluation at the conclusion of the simulator instruction.

2.8 DOCUMENT CONTROL/REVISION

The process followed in revising, reviewing, and approving the EOPs and supporting documents must be clearly defined. The process is not unique to EOPs, and administrative control procedures are already established. However, the process will be reviewed and clarified as necessary to assure that future information needed in the EOPs is correctly incorporated.

3. REFERENCES

3.1 NUREG 0737, Supplement 1, item 7.2b, page 15.

3.2 Safety Evaluation of "Emergency Procedure Guidelines," dated July 29, 1983.

3.3 Combustion Engineering Emergency Procedure Guidelines, CEN-152, Rev. 01.

4. FIGURES

4.1 EOP Implementation Plan

4.2 Sequence of Decisions for Off-Normal Operations

4.3 EOP Comments and Suggestions Form

4.4 EOP Verification Checklist

4.5 EOP Evaluation Form

FIGURE 4.1

EOP IMPLEMENTATION PLAN

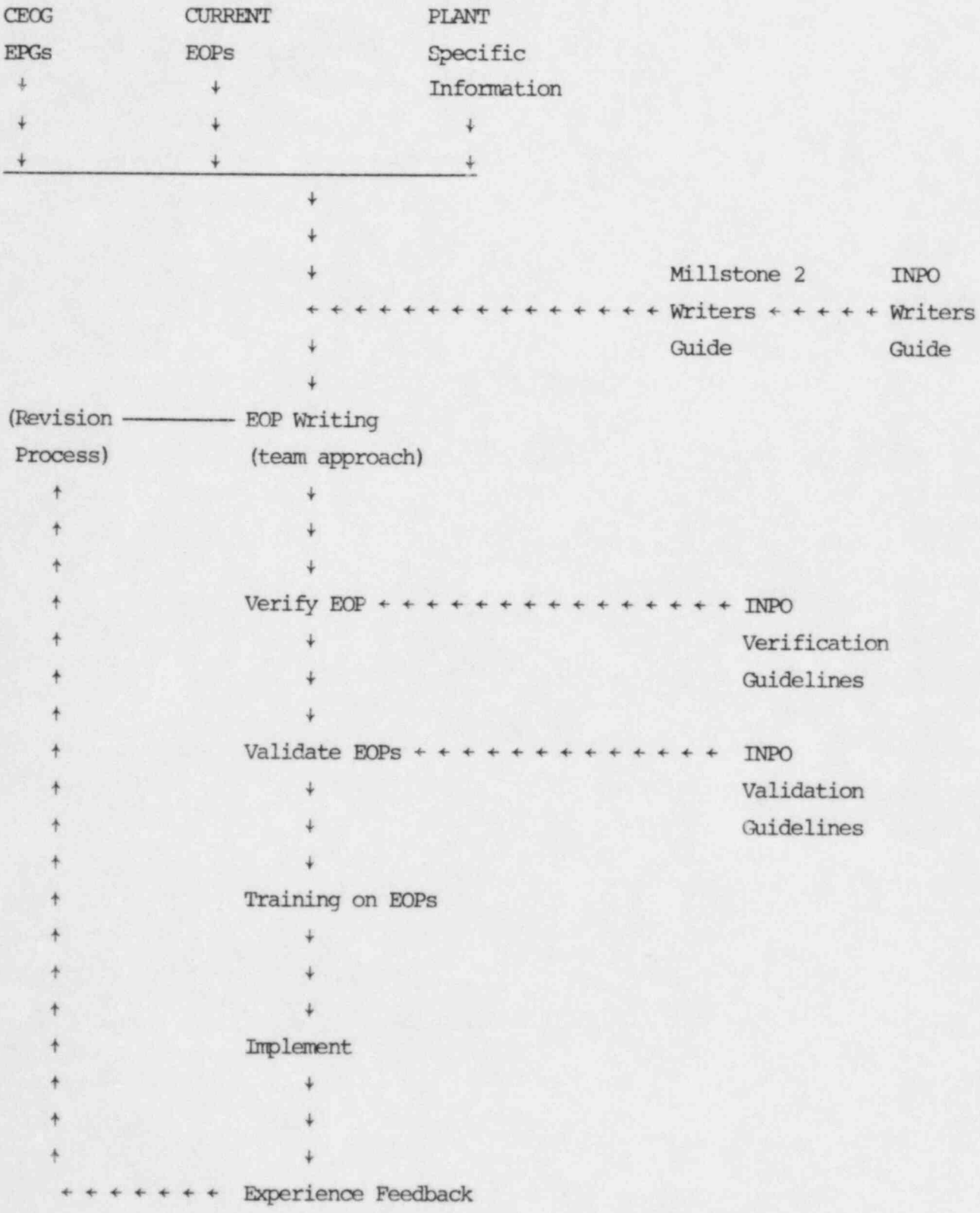


Figure 4-2

SEQUENCE OF DECISIONS FOR OFF-NORMAL OPERATIONS

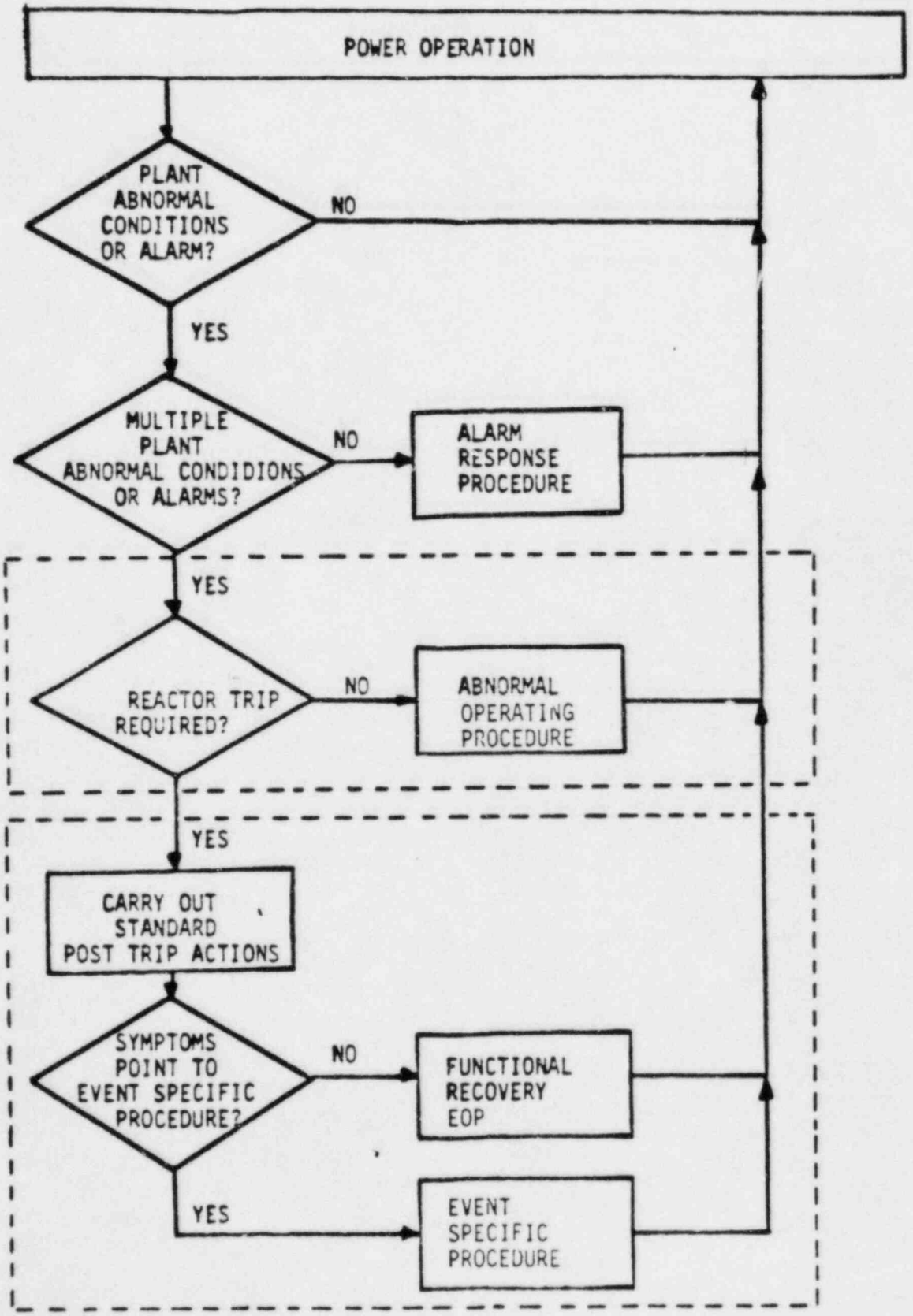


FIGURE 4.3

EOP COMMENTS & SUGGESTIONS FORM

1. EOP Title _____ NUMBER _____

   Page _____ Step _____

2. GENERAL _____

3. COMMENTS/SUGGESTIONS

   Name _____

   Date _____

4. RESCLUTION

   Name _____

   Date _____

FIGURE 4.4

EOP VERIFICATION CHECKLIST COVER SHEET

A. IDENTIFICATION

EOP Number_____ Rev._____

EOP Title_____

B. REVIEW

I have reviewed the above procedure against the verification checklist and have found the procedure to conform to the criteria noted.

EOP Verifier_____

(signature)

Date_____

C. IMPLEMENTATION

1. The checklist can be as a reviewing aid when an EOP is written or revised.

2. All discrepancies should be corrected before the EOP is approved if at all possible, or planned for correction as part of the next EOP revision.

3. The reviewer should:
   a. Read the checklist in detail, (refer to the EOP writers guide for additional detail).
   b. Read the procedure thoroughly.
   c. Review the procedure section by section, completing the appropriate sections of the checklist.
   d. Comment on any areas that are not a clear yes answer to the checklist question.
   e. Review the checklist comments with the EOP writer for resolution.
   f. Forward the checklist to the Operations Supervisor. Note any comments that could not be resolved.

MILLSTONE UNIT 2

EOP VERIFICATION CHECKLIST

Area	Yes	Comments

I. PROCEDURE-GENERAL

A. Written Correctness

1. Legibility

a. Are the text, tables, graphs, figures, and charts legible to the reader? _____

2. EOP Format Consistency

a. Do the following sections exist in each EOP?

1. PURPOSE? _____
2. ENTRY CONDITIONS? _____
3. OPERATOR ACTIONS? _____
4. FIGURES? _____

b. Is the operator actions section presented in a dual column? _____

c. Is the page layout consistent with the writer's guide/exhibits? _____

3. Identification Information

a. Is the procedure title accurate and descriptive? _____

Area	Yes	Comments

b. Does each page contain the correct:

1) procedure designator? _____
2) revision number? _____
3) page number? _____

c. Does the procedure have all its page in the correct order? _____

II. STEPS, CAUTIONS, NOTES

A. Written Correctness

1. Information Presentation

a. Are instruction steps numbered correctly? _____

b. Are instruction steps constructed so that:

1) Each step deals with only one idea? _____
2) Steps are short and simple? _____
3) Operator actions are explicit? _____
4) Objectives of operator action is specifically or adequately stated? _____
5) If there are three or more objectives, they are listed? _____
6) Punctuation and capitalization is proper? _____

Area		Yes	Comments
	7) Abbreviations are correct and understandable to the operator?	_____	
c.	Do instructions steps make proper use of logic structure?	_____	
d.	When an action instruction is based on receipt of an annunciator alarm, is the set-point of the alarm identified?	_____	
e.	Are cautions used appropriately?	_____	
f.	Are cautions properly placed?	_____	
g.	Are cautions constructed so that:		
	1) they do not contain operator actions?	_____	
	2) the do not use extensive punctuation?	_____	
	3) they make proper use of emphasis?	_____	
h.	Are notes properly used?	_____	
i.	Are notes properly placed?	_____	
j.	Are notes worded so that they do not contain operator actions?	_____	
k.	Are numerical values properly written?	_____	
l.	Are values in the procedure specified in such away that mathematical operations are not required of the user?	_____	

Area	Yes	Comments
(Is a chart or graph provided in the procedure for necessary operator calculations?)		
m. Are units of measurement in the EOP the same as those on instruments?	_____	
o. Are the values compatible with the ability to read the instruments?	_____	
2. Procedure Referencing and Branching		
a. Do the referenced and branched procedures identified in the EOPs exist for operation use?	_____	
b. Is the use of referencing minimized?	_____	
c. Are referencing and branching instructions correctly worded?	_____	
1) "go to"		
2) "refer to"		
d. Do the instructions avoid routing users past important information such as cautions?	_____	
e. Are the exit conditions capable with the entry conditions of the referenced or branched procedure?	_____	

Area	Yes	Comments

B. Technical Accuracy

1. Entry conditions

a. Are the entry conditions of the EOP appropriate? _____

b. If additional entry conditions have been added, are they:

1) unique entry conditions? _____

2) not excessive in number? _____

2. Quantitative Information

a. Do the quantitative values include tolerance bands? _____

3. Plant Hardware Information

a. Is the plant hardward specified in the EOP available for operator use? _____

1) equipment? _____

2) control? _____

3) indicators? _____

4) instrumentation? _____

JB:ejl

MISC5

FIGURE 4.5

FINAL EMERGENCY OPERATING PROCEDURES EVALUATION

NAME _____ on Date) _____

was observed performing the following evolutions and at the listed watchstations using the Upgraded Emergency Operating Procedures.

Event	Watchstation

Their understanding and use of the Emergency Operating Procedures was found to be SATISFACTORY/UNSATISFACTORY as this time.

_____ _____

Signature (SRO License Holder) Date

MISC5

ejl

MILLSTONE UNIT 2

EMERGENCY OPERATING PROCEDURE
WRITERS GUIDE

ATTACHMENT A

January, 1985

MILLSTONE UNIT 2

EMERGENCY OPERATING PROCEDURE
WRITERS GUIDE

Table Of Contents

Table of Contents (cont)

Table of Contents (cont)

List of Exhibits

List of Tables

1. INTRODUCTION

1.1 PURPOSE

This document provides guidance for the preparation and revision of Emergency Operating Procedures (EOPs). Its purpose is to ensure that the information and guidance contained in the EOPs will be presented in a consistant format and style. This format and style allows for clarity of procedural actions and effective control room personnel interactions.

1.2 SCOPE

This writers guide is to be used for the preparation and revision of Emergency Operating Procedures for Millstone Unit 2.

2. EOP DESIGNATION AND NUMBERING

EOP's are distinguished from other plant procedures by their unique red binder and their unique identification letters, numbers and titles. EOP folders are kept at the control room operators desk for easy access. The folders contain the EOP and its associated figures and forms.

2.1 STATION PROCEDURE COVER SHEET

Every EOP will have a Millstone Station Procedure cover sheet form, SF-301, that contains the following information (See Exhibit 1)

A. Identification
   - EOP Number
   - EOP Revision Number
   - EOP Title
   - EOP Author (prepared by)

B. OPS Supervisor Signature

C. Unreviewed Safety Question Evaluation and Environmental Impact

D. PORC/SORC Approval

E. Approval and Implementation Date

2.2 TITLE PAGE

Every EOP will have a title page (page 1) that contains the following information: (The example format is shown in Exhibit 2)

Procedure Number
Revision Number
Procedure Title
Page Number

2.3 PROCEDURE DESIGNATION

The letters "EOP" will proceed the procedure number. For Millstone Unit 2 the first digit will be 2. EOPs are 2525 through 2549.

2.4 PROCEDURE NUMBERING

The following list identifies the Emergency Operating Procedures.

Emergency Operating Procedures (EOP's)

EOP 2501 Incident Assessment and Classification Unit 2
EOP 2525 Standard Post Trip Actions
EOP 2526 Reactor Trip Recovery
EOP 2527 Reserved
EOP 2528 Electrical Emergency
EOP 2529 Reserved
EOP 2530 Reserved
EOP 2531 Reserved
EOP 2532 Loss of Primary Coolant
EOP 2533 Reserved
EOP 2534 Steam Generator Tube Rupture
EOP 2535 Reserved
EOP 2536 Excess Steam Demand
EOP 2537 Loss of all Feedwater

EOP 2539 Reserved
EOP 2540 Functional Recovery
EOP 2541 to 2549 Reserved

2.5 PROCEDURE REVISION NUMBERING

The abbreviation "Rev." followed by the revision number will be on a separate line just below the procedure number.

When a revision is issued, the changes in the revision shall be identified by a solid vertical line in the right hand margin opposite the sentence revised.

2.6 PAGE IDENTIFICATION AND NUMBERING

Each page of the procedure will be identified by (1) the procedure designator and number, (2) the revision number, (3) the page number specified. In addition the last page of the procedure will be labeled "Final".

3. FORMAT

The following description of format applies to all EOP's. This format is designed for the best possible location of the printed information.

3.1 PAGE FORMAT

3.1.1 Exhibit 1 shows a sample Station Procedure Cover Sheet

3.1.2 Exhibit 2 shows a sample title page.

3.1.3 Exhibit 3 shows a sample beginning page, and Sections 1, 2 and 3.

3.1.4 Exhibits 4, 5 and 6 shows a sample procedure pages.

3.2 PROCEDURE ORGANIZATION

Each EOP will contain the following sections:

Section 1 PURPOSE - The purpose will define what the procedure will accomplish.

Section 2 ENTRY CONDITIONS - The entry conditions will give those conditions for which the procedure will be used. These give the operator a means of confirming that he has chosen the appropriate procedure for particular emergency conditions. This section will denote if all or some of the conditions are required for use of the procedure.

Section 3 OPERATOR INSTRUCTIONS - These actions are taken to stop further degradation of existing conditions, to initiate desirable effects and to allow the operator to evaluate the situations. Only the Standard Post Trip Actions are immediate and must be available from memory. The rest of the EOP's contain specific subsequent operator actions dependent on existing plant conditions after completion of the Standard Post Trip Actions.

Section 4 FIGURES - Contains of all figures used in the EOPs.

3.3 SECTION NUMBERING

Section numbering is required to provide easy identification of the instruction steps of the procedure. Exhibits 3, 4 and 5 are used as examples of the desired section numbering system.

Section step numbering sequence is as follows:

3.1
3.2 } major steps
3.3

a.
b. } first subordinate level
c.

i.
ii. } second subordinate level
iii.

4. WRITING PROCEDURES

4.1 GENERAL INSTRUCTIONS

Procedures must be written with the detail sufficient to support the user's needs. This requires the assumption of a minimum knowledge and experience level. This level is defined to be an operator that has recently received a reactor operator's license on Millstone Unit 2. It is important to keep this in mind when deciding on the detail level of procedural steps, cautions, notes and figures. Avoiding too much detail is important in order to minimize errors and allow for a timely response. The following general rules are to be followed:

- Instruction steps should deal with only one idea.
- Instruction steps should be sentence fragments.
- Notes and cautions should be in simple but complete sentences.
- Complex evolutions should be prescribed in a series of steps, with each step made as simple as possible.
- Objects of operator actions should be specifically stated.
- Space must be provided for operator checkoff prior to each instruction step.
- Minimal indentation to give best use of space and is used for clarity only.
- Limits should be expressed in numbers whenever possible (refer to Subsection 5.5).
- Mandatory sequence of steps is assumed unless otherwise stated.
- Identification of components and parts should be identified by common usage terminology.
- Expected results of routine tasks need not be stated.
- System response time associated with performance of the instruction is provided in notes when this information is helpful.

- Use a Caution to describe the conditions that will introduce instrument error.
- Instrumentation values should be compatible with the ability to read the instrument.
- Do not require a mathematical calculation to convert to a tolerance band.
- Use a tolerance band.
- Units of measure are consistent with the instrument.
- Use the verb verify when the user is to perform a verification step. Specify precisely what is to be verified.
- If a step is to be performed continuously or periodically, specific detail must be provided as to the time interval required.
- Recurrent steps should not be used. An example of a recurrent step is "Check CST level every 30 minutes".
- Alternative steps can be provided for in the contingency action column. Alternative steps should be listed in order of preference and separated by "or".
- The use of required concurrent steps should be avoided. If the use of concurrent steps is necessary, specific guidance must be provided. These steps should not be beyond the control room staffs capability.
- EOP steps should be written considering the normal plant shift staff levels as specified by Technical Specifications and the station emergency plan.
- The EOPs should be structured so that operator roles specified in the EOPs are consistent with pre-established leadership roles and divisions of responsibilities that exist during normal plant operation.
- The action steps should be structured so as to minimize physical conflicts between personnel and to minimize the amount of movement needed for carrying out the steps.
- The action steps should be structured to avoid their unintentional duplication by operators.

4.2 WRITING INSTRUCTION STEPS

EOP's will be written in a two column format. Exhibit 4 provides an example. The instructions shall be in short, concise and easily understood statements. Instructions written in fragments as opposed to complete sentences provide the best use of space and allow for clearest possible understanding. Action steps should be wholly contained on a page.

4.2.1 Instructions

This column provides the expected operator actions.

- Begin each step with the action verb when logic terms are not required.
- Include the location of the parameter or control being used in parenthesis.

4.2.2 Contingency Actions

This column provide actions for the operator to take only if the instruction column step cannot be performed. This action will most likely require the manual initiation of a system that is expected to operate automatically. Other actions may include:

1) reference to an AOP or OP
2) reference to another EOP
3) reference to outside assistance from the TSC or EOF.
4) Continue with the procedure
5) Not Applicable

4.3 USE OF LOGIC TERMS

The logic terms If, When, and Then, are often necessary to describe precisely a set of conditions or sequence of actions. When logic statements are used, logic terms will be emphasized so that all the conditions are clear to the operator. Emphasis will be achieved by capitalizing the first letter and underlining.

The use of "and" and "or" within the same action should be minimized. When "and" and "or" are used together, the action should not be confusing or ambiguous.

Use other logic terms as follows:

- When attention should be called to combinations of conditions, the word "and" shall be placed between the description of each condition. The word "and" shall not be used to join more than two conditions. If more than two conditions need to be joined, a list format shall be used and the operator directed to do all of them.

- The word "or" shall be used when calling attention to alternative combinations of conditions. The use of the word "or" shall always be in the inclusive sense. To specify the exclusive "or" the following may be used: "either A or B but not both."

- When action steps are contingent upon certain conditions or combinations of conditions, the step shall begin with the words If or When followed by a description of the condition or conditions (the antecedent), a comma, the word Then, followed by the action to be taken (the consequent). When is used for an expected condition. If is used for possible condition.

- Then shall not be used at the end of an action step to instruct the operator to perform the next step. It adds confusion by running actions together.

4.4 CAUTIONS AND NOTES

Cautions can be considered in two fundamental categories: those that apply to the entire procedure and those that apply

to a portion of the procedure. Those that apply to the entire procedure are called precautions and are covered in operator training. Those that apply to a portion of a procedure are called cautions and are placed immediately before the portion of the procedure to which they apply. Cautions are to extend across the entire page and are bordered top and bottom by solid horizontal lines. This placement of cautions ensures that the procedure user observes the caution before performing the step. A caution shall not be used instead of an instructional step and it cannot direct an action. It should be used to denote a potential hazard to equipment or personnel associated with or consequent to the subsequent instructional step.

If additional information other than cautions is necessary to support an action instruction, a note should be used. A note should present information only, not instructions, and should extend across the entire page. See Exhibit 4 for examples of caution and note format.

Specific rules for cautions and notes:

- Never continue a caution or note from one page to the next.

- Cautions are emphasized by their full page width, a solid horizontal line top and bottom and additional space top and bottom.

- Caution and notes should be placed on the same page as the step they address.

- Notes are emphasized by their full page width and added space top and bottom.

- If two or more separate cautions are together the bottom horizontal line is below the last caution only. The word CAUTION is only present before the first caution.

The separate cautions will be identified by number. (Refer to Exhibit 4).

- The heading CAUTION or NOTE is always centered, capitalized and underlined.

4.5 CALCULATIONS

Mathematical calculations should be avoided in EOPs. A chart, graph, or other operator aid should be used when a value has to be determined.

4.6 USE OF UNDERLINING

Underlining will be used for emphasis, logic terms, caution, note, section headings and column headings. Underline only where appropriate for required emphasis.

4.7 REFERENCING AND BRANCHING TO OTHER PROCEDURES OR STEPS

Referencing implies that a procedure or steps of a procedure will be used as a supplement to the procedure presently being used.

Referencing other steps within the procedure being used, either future steps or completed steps, should be minimized because it causes confusion.

To minimize potential operator confusion, branching will be used when the operator is to leave one procedure and use another procedure. Use the words "go to" when the operator is to leave the procedure and not return unless directed. The words "refer to" will be used when the user is to use another procedure concurrently with the original procedure. See exhibit 6 for examples.

4.8 COMPONENT IDENTIFICATION

With respect to identification of components, use the following guidelines:

- Equipment, controls, and displays will be identified in common usage terms. These terms may not always match engraved names on panels but must be clear and precise.

- Where the engraved names and numbers are specifically used the engraving should be quoted verbatim and enclosed in quotation marks.

- If the component is seldom used, difficult to find, or may be confused with another component, then location information should be given in parentheses.

4.9 LEVEL OF DETAIL

Too much detail in EOPs should be avoided in the interest of reading and comprehension. The level of detail required is that necessary for an operator that has recently received a Reactor Operators license on Millstone Unit 2.

To assist in determining the level of EOP detail, the following general rules apply.

- For control circuitry that executes an entire function upon actuation of the control switch, the action verb appropriate to the component suffices without further amplification of how to manipulate the control device. Example: Open generator field breaker.

- Guidance for dealing with abnormal results need not be prescribed within procedural steps when it is a matter of standard practice. For example, observation of noise, vibration, erratic flow, or discharge pressure need not be specified by steps that start pumps.

4.10 PRINTED OPERATOR AIDS

When information is presented using graphs, charts, tables, and figures, these aids must be self-explanatory, legible, and readable under the expected conditions of use within the reading precision of the operator.

4.10.1 Units of Measure

Units of measure on figures, tables, and attachments should be given for numerical values which represent measurement data or calculating results. Use a virgule (slant line) instead of "per" Examples: ft/sec, lbs/hr. See Table 1 for preferred abbreviations.

4.10.2 Titles and Headings

Capitalization should be used for references to tables and figures, titles of tables and figures within text material, and column headings within a table.

4.10.3 Figure, Table, and Attachment Numbering

Sequential arabic numbers will be assigned to figures, tables, and attachments in separate series. The seqence should correspond with the order of their reference in the text. The symbol "#" and abbreviation "No." are unnecessary and should not be used. The number alone suffices.

Example: Figure 4.1

Page identification for attachments should consist of a block of information that identifies (1) procedure number, (2) procedure revision, (3) attachment number, (4) page number. Page numbering of attachments should meet the requirements of Subsection 2.5.

4.10.4 Printed operator aids are included in the EOP folder for use by the operator as he is using the EOP.

4.10.5 Graph axes should be labeled with the parameter to be read. Units must be equivalent to control board instrumentation and values presented in such a manner as so the information can be determined with the necessary accuracy.

5. MECHANICS OF STYLE

5.1 SPELLING

Spelling should be consistent with modern usage. When a choice of spelling is offered by a dictionary, the first spelling should be used.

5.2 HYPHENATION

Hyphens are used between elements of a compound word when usage calls for it. The following rules should be followed for hyphenation.

- When doubt exists, the compound word should be restructured to avoid hypenation.

- Hyphens should be used in the following circumstances:
  a. in compounds with "self"; Examples: self-contained, self-lubricated.
  b. when the last letter of the first word is the same vowel as the first letter of the second word; as an alternative, two words may be used: Example: fire-escape or fire escape (preferred).
  c. when misleading or awkward consonants would result by joinng the words; Example: bell-like
  d. when a letter is linked with a noun; Examples: X-ray, O-ring, U-bolt, I-beam.
  e. to separate chemical elements and their atomic weight; Examples: Uranium-235 or U-235

5.3 PUNCTUATION

Punctuation should be used only when necessary to aid reading and prevent misunderstanding. Word order should be selected to require a minimum of punctuation. When extensive punctuation is necessary for clarity, the sentence should be rewritten and possibly made into several sentences. Punctuation will be in accordance with the following rules.

5.3.1 BRACKETS

Do not use brackets.

5.3.2 COLON

Do not use colons.

5.3.3 COMMA

Minimize use of commas. Use of many commas is a sign the instruction is too complex and needs to be rewritten.

After conditional phrases for clarity and ease of reading, use a comma. Example: When level decreases to 60 inches, Then start pump . . . .

5.3.4 PARENTHESES

Parentheses will be used to indicate panel numbers locations, or other information judged to be suitable for parenthetical inclusions, such as an alternate action for a contingency step.

5.3.5 PERIOD

Use a period at the end of complete sentences and for indicating the decimal place in numbers.

5.4 VOCABULARY

Words used in procedures should convey precise understanding to the operator.

- Use simple words. Simple words are usually short words of few syllables and common use.

- Use the common words that are normally used in control room communications.

- Use words that are concrete rather than vague, specific rather than general, familiar rather than formal, precise rather than blanket and use their meaning consistantly.

- Words with specific meaning should be used. Acceptable verbs are listed in Table 2.

- Avoid the use of pronouns

5.5 NUMBERICAL VALUES

The use of numerical values should be consistent with the following rules:

- Arabic numerals should be used.

- For numbers less than unity, the decimal point will be preceded by a zero. For example: 0.1

- The number of significant digits should be equal to the number of significant digits available from the display and the reading precision of the operator.

- Acceptance values should be specified in such a way that addition and subtraction by the user is avoided. This can generally be done by stating acceptance values as limits. Example: 580° to 600°F.

- Do not write out values.

5.6 ABBREVIATIONS, LETTER SYMBOLS, AND ACRONYMS

The use of abbreviations and acronyms should be used when they are the common use terms in the control room by operation personnel. Acceptable abbreviations and acronyms are provided by Table 1.

Capitalization of abbreviation should be uniform. If the abbreviation is comprised of lowercase letters, it should appear in lowercase in a title or heading. The period should be omitted in abbreviations except in cases where the omission would result in confusion.

Letter symbols may be used to represent operations, quantities, elements, relations, and qualities.

An acronym is a type of symbol formed by the initial letter or letters of each of the successive parts or major parts of a compound term. Acronyms may be used if they are defined or commonly used.

5.7 CAPITALIZATION

The standard American English usage for capitalization should be used. Capitalization should also be specifically used for the following.

- Titles
- Section headings
- Note and Caution headings
- The first word of each action step.

6. TYPING FORMAT

6.1 GENERAL TYPING INSTRUCTIONS

For emergency operating procedures, the following general requirements are to be followed.

- Plain white, bond paper should be used.

- With the exception of forms and figures, the procedures will be produced by the capabilities of the typewriter or word processor. Manual additions such as lines or symbols should be avoided.

- Letter gothic, pitch 12, printwheel is to be used.

6.2 PAGE ARRANGEMENT

- Samples of proper EOP page arrangement are provided in exhibits 3, 4, 5 and 6. The procedure writers and typists should follow these guidelines to achieve a uniform format from one EOP page to the next.
  - Left hand margin: 7/8 inch
  - Right hand margin: 1/2 inch
  - Upper margin: 1 inch
  - Lower margin: 1/2 inch
  - Margin betwen dual columns: 1/2 inch
  - Procedure title centered in capitals prior to the first section.
  - Line spacing as shown by the exhibits.

6.3 HEADING AND TEXT ARRANGEMENT

Block style, as illustrated in Exhibit 4, is to be used. First level section headings shall be in full capitals, with an underscore.

6.4 BREAKING OF WORDS

Breaking of words shall be avoided to facilitate operator reading.

6.5 ROTATION OF PAGES

Pages are not to be rotated.

6.6 PRINTED OPERATOR AIDS

Figures include graphs, drawings, diagrams, and illustrations. The following rules are established.

- The figure number and title should be of letter gothic type, pitch 12.
- The figure field must not violate specified page margins.
- The figure field should be of sufficient size to offer good readability.
- The essential message should be clear; simple presentations are preferred.
- Grid lines of graphs should be at least 1/8-inch apart; numbered grid lines should be bolder than unnumbered grid lines.
- Labeling of items within the figure should be accompanied by arrows pointing to the item.
- The items within the figure should be oriented naturally insofar as possible. For example, height on a graph should be along the vertical axis.
- All lines in figures should be reproducible.

Tables should be typed using the following rules.

- Type style and size should be the same as that for the rest of the procedure.

- A heading should be entered for each column and centered within the column; the first letter of words in the column headings should be capitalized.

6.7 CAUTIONS AND NOTES

All notes and cautions shall be distinguishable from the rest of the text. Refer to Exhibit 4.

6.8 USE OF FOLDOUT PAGES

Foldout pages are to be avoided. When used, a foldout page is treated as a single page. It should follow the same format as a standard page except the width is different. The page should be folded so that a small margin exists between the fold and the right-hand edge of standard pages. This will reduce wear of the fold.

6.9 USE OF OVERSIZED PAGES

Oversize pages should not be used. They should be reorganized or reduced to a standard page.

6.10 USE OF REDUCED PAGES

Reduced pages should not be used. Final size of reduced pages should be standard page size.

7. REPRODUCTION

Reproduction will be done on a standard copier, single-sided copy only. Plain white bond paper shall be used. The original office copy is to be used as the source for copies. After reproduction copies should be checked for quality.

EXHIBIT 1

E.J. Mroczka — 12-28-81
Form Approved by Station Superintendent — Effective Date

STATION PROCEDURE COVER SHEET

A. IDENTIFICATION

Number EOP 2540A Rev. 0

Title FUNCTIONAL RECOVERY OF REACTIVITY CONTROL

Prepared By H. Williamson

B. REVIEW

I have reviewed the above procedure and have found it to be satisfactory.

TITLE	SIGNATURE	DATE
DEPARTMENT HEAD		

C. UNREVIEWED SAFETY QUESTION EVALUATION DOCUMENTATION REQUIRED:

(Significant change in procedure method or scope as described in FSAR) YES [ ] NO [ ]
(If yes, document in PORC/SORC meeting minutes)

ENVIRONMENTAL IMPACT

(Adverse environmental impact) YES [ ] NO [ ]
(If yes, document in PORC/SORC meeting minutes)

D. PORC/SORC APPROVAL

PORC/SORC Meeting Number _____

E. APPROVAL AND IMPLEMENTATION

The attached procedure is hereby approved, and effective on the date below:

Station/Service/Unit Superintendent — Effective Date

SF-301
Rev. 5

EXHIBIT 2

FUNCTIONAL RECOVERY OF REACTIVITY CONTROL

Page No.	Eff. Rev.
1-10	0

EXHIBIT 3
LOSS OF PRIMARY COOLANT

1. PURPOSE

To provide the subsequent operator actions which must be accomplished in the event of a loss of primary coolant. These actions are taken after completion of the Standard Post Trip Actions and a loss of primary coolant event has been diagnosed. The actions in this procedure are necessary to ensure that the plant results in a stable safe condition.

2. ENTRY CONDITIONS

a. The Standard Post Trip Actions have been accomplished

and

b. Plant conditions indicate that a loss of primary coolant has occurred by any one or more of the following

i. Abnormal change in pressurizer level (C03)
ii. Decreasing pressurizer pressure (C03)
iii. Increasing containment pressure (C01)
iv. High containment radiation (RC-14, C101)
v. Unbalanced charging and letdown flows (C02)

3. OPERATOR ACTIONS

Instructions	Contingency Actions
_____3.1 Verify Standard Post Trip Actions, EOP 2525, have been performed	3.1 Perform Standard Post Trip Actions, EOP 2525

EXHIBIT 4

Instructions	Contingency Actions
_____3.10 Verify no leakage into RBCCW System by a. Surge tank level not increasing (C06) and b. RBCCW radiation monitors not increasing (RC14)	3.10 Do the following a. Attempt to locate leak (local) b. Isolate component with leak (C06/local) c. Drain surge tank to maintain level (C06) d. Continue with this procedure

---

CAUTION

Containment spray moisture may affect proper operation of non-qualified equipment and instrumentation inside containment. When termination criterion is met, containment spray should be promptly terminated.

_____3.11 When containment pressure is less than 10 psig (C01), Then do the following a. Reset containment spray actuation modules (ESAS) b. Stop the containment spray pumps (C01) c. Realign for automatic operation (C01)	3.11 Continue with this procedure

EXHIBIT 5

Instructions	Contingency Actions
_____3.6 If containment pressure increases to 27 psig (C01), Then verify CSAS (C01X)	3.6 Manually initiate CSAS (C01)
NOTE Worst case licensing analysis (assumes most reactive CEA stuck out) predicts a momentary return to power during initial blowdown phase.	
_____3.7 If T_c decreases to 500°F, Then verify concentrated boric acid being injected into the RCS at greater than 40 gpm by the CVCS (C02)	3.7 Do the following a. Commence boration using the boric acid pumps as follows i. Open boric acid pump discharge to charging pump suction, 2-CH-514 (C02) ii. Start both boric acid pumps (C02) iii. Close boric acid pump recirculation valves, 2-CH-510 and 2-CH-511 (C02) b. If boric acid pumps fail to start, Then i. Open boric acid gravity feed valves 2-CH-508 and 2-CH-509 (C02) ii. Close volume control tank outlet valve, 2-CH-501 (C02) c. Start all available charging pumps (C02)

EXHIBIT 6

Instructions	Contingency Actions
CAUTION Pressurizer level may not provide an accurate indication of total RCS inventory due to voids. Voids may exist, especially if reactor coolant pumps are not running. However, pressurizer level in conjunction with a subcooled RCS is an indication that the core is covered.	
_____3.3 Confirm the diagnosis of a loss of coolant event a. Refer to Break Identification Chart, Figure 4.1 and b. Direct Chemistry to sample steam generators for activity	3.3 a. If an excess steam demand is diagnosed, Then go to EOP 2536 or b. If a steam generator tube rupture is diagnosed, Then go to EOP 2534
_____3.4 If pressurizer pressure decreases to 1600 psia (C03) or containment pressure increases to 5 psig (C01) Then verify SIAS, CIAS, and EBFAS (C01X)	3.4 Manually initiate SIAS, CIAS and EBFAS (C01)
_____3.5 If pressurizer pressure decreases to 1600 psia, Then stop all RCPs (C03)	3.5 Continue with this procedure
_____3.6 If containment pressure increases to 27 psig (C01), Then verify CSAS (C01X)	3.6 Manually initiate CSAS (C01)

Table 1

Acronyms and Abbreviations

ACB	Air-quenched Circuit Breaker
AOP	Abnormal Operating Procedure
CAR	Containment Air Recirculation
CEA	Control Element Assembly
CEDM	Control Element Drive Mechanism
CIAS	Containment Isolation Actuation Signal
CONVEX	Connecticut Valley Exchange
CPF	Condensate Polishing Facility
CSAS	Containment Spray Actuation Signal
CST	Condensate Storage Tank
CVCS	Chemical and Volume Control System
EBFAS	Enclosure Building Filtration Actuation Signal
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
ESAS	Engineered Safeguards Actuation System
FRV	Feedwater Regulating Valve
HPSI	High Pressure Safety Injection
LIS	Long Island Sound
LPSI	Low Pressure Safety Injection
MG	Motor Generator
MSI	Main Steam Isolation (Actuation Signal)
MSIV	Main Steam Isolation Valve
NSST	Normal Station Service Transformer
OP	Operating Procedure
PDT	Primary Drain Tank
PIR	Plant Incident Report
PORV	Power Operated Relief Valve

Table 1 (cont)

RBCCW	Reactor Building Closed Cooling Water
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RPS	Reactor Protection System
RSST	Reserve Station Service Transformer
SIAS	Safety Injection Actuation Signal
SIT	Safety Injection Tank
SJAE	Steam Jet Air Ejector
SRAS	Sump Recirculation Actuation Signal
STA	Shift Technical Advisor
TBCCW	Turbine Building Closed Cooling Water
TCB	Trip Circuit Breaker
VCT	Volume Control Tank
VDC	Volt Direct Current
TSC	Technical Support Center
avg	average
cpm	counts per minute
cps	counts per second
dpm	decades per minute
ft.	feet
gal	gallon(s)
gpm	gallons per minute
hr.	hour(s)
Hz.	hertz, cycles per second
i.e	id est (that is)
in.	inch(es)
Kw.	Kilowatt(s)
mr.	millirem
mw.	megawatts
ppb	parts per billion
ppm	parts per million
psia.	pounds per square inch absolute

Table 1 (cont)

psig.	pounds per square inch gage
rad	radiation absorbed dose
rem	roentgen equaivilent man
rpm	revolutions per minute
scfm.	standard cubic feet per minute
sec	second(s)
T	temperature
Tavg.	average temperature
Tc.	cold leg temperature
Th.	hot leg temperature
vs.	Versus
wt.	weight
yr.	year
%	percent
/	per
^{o}F.	degree farenheit
*	asterisk
" "	quotation marks
( )	parentheses

Table 2

Verbs

Verb	Application
Adjust	To make a change in
Align	To cause to be in correct position
Allow	To permit a stated condition to be achieved prior to proceeding, for example, "allow discharge pressure to stabilize".
Call up	Request from the plant computer.
Check	To perform a physical action that achieves a result such as "check lube oil level".
Close	To change the physical position of a mechanical device so that it prevents physical access or flow. For example shut valve 2 SI-113. When used with respect to an electrical breaker, it allows current flow.
Complete	To accomplish a specified action.
Confirm	To remove doubt about.
Continue	Maintain without interuption.
Control	To guide or regulate the operation of.
Decrease	Do not use as a verb.

Table 2 (Cont)

Verb	Application
Determine	To decide by choice of possibilities.
Direct	To give instruction to.
Dispatch	To send off or away with promptness.
Ensure	To make certain or take action if required to produce a certain result.
Establish	To make arrangements for a stated condition, for example, "establish communication with control room".
Increase	Do not use as a verb.
Initiate	To cause the beginning of
Inspect	To measure, observe, or evaluate a feature or characteristic for comparison with specified characteristics. The method of inspection should be concluded, for example "visually inspect for leaks".
Install	To establish in an indicated place or condition.
Isolate	To separate from another source or system.
Lower	To reduce, for example: "lower steam generator pressure."
Monitor	To keep track of, regulate, or control the operation of a machine or process.
Notify	To inform.

Table 2 (cont)

Verb	Application
Open	To change the physical position of a mechanical device, such as a valve or door to the unobstructed position that permits access or flow, For example: open valve When used with respect to an electrical breaker, it prevents current flow.
Operate	To cause to function
Perform	To carry out an action
Position	To put in place, for example, position auxiliary feedwater handswitches to reset.
Purge	To make free of or remove an unwanted substance. For example: "Purge the Containment until hydrogen concentration is less than 2%".
Raise	To increase, For example, "Raise CST water level".
Record	To document specified condition or characteristic, for example, "record discharge pressure"
Refer	Use another source for additional information.
Set	To physically adjust to a specified position. For example, set pressurizer level control to "Auto".
Shut	Do not use. The verb "close" should be used instead.
Start	To initiate motion of an electric or mechanical device directly or by remote control, for example, "start .... pump"

Table 2 (Cont)

Verb	Application
Stop	To cease the action of, For example "stop.....pump"
Throttle	To operate a valve in an intermediate position to obtain a certain flow rate, for example, "throttle valve FW-43 to ....."
Vent	To permit a gas or pressure to escape, for example, "vent.....pump"
Verify	To prove to be true, exact, or accurate by observation of a condition or characteristic for comparison with an original or a procedural requirement. For example, verify discharge pressure (no action is required)