DUKE POWER COMPANY

CATAWBA NUCLEAR STATION

VERIFICATION PROCESS FOR EMERGENCY PROCEDURES

1.0 PURPOSE

1.1 The purpose of this procedure is to define the administrative process to be used in the verification of Operations Emergency Procedures.

2.0 REFERENCES

A. Emergency Operating Procedures Verification Guideline - by INPO December 1982 Draft

B. CNS Writer's Guide For Emergency And Abnormal Procedures

3.0 DESCRIPTION

A. The verification process will consist of two phases:

1. Written Correctness - To ensure procedures conform to the format and other principles as specified in the Writer's Guide.

2. Technical Accuracy - To ensure that plant specific Emergency Procedures are technically accurate, consistent with the plant specific Emergency Procedure guidelines which are based on Vendor guidelines and include all appropriate licensing commitments.

B. Both phases of verification must be completed prior to implementation of all Emergency Procedures and changes to EP's. Since the two phases are independent, they will be performed as required to minimize impact on initial development schedule or change implementation.

4.0 RESPONSIBILITIES

4.1 Superintendent of Operations

A. Shall approve all changes to this Procedure.

4.2 Operating Engineer Document Development (or his designee)

A. Shall have overall responsibility for both phases of the verification process.

4.0 RESPONSIBILITIES

    4.1 Superintendent of Operations

        A. Shall approve all changes to this Procedure.

    4.2 Operating Engineer Document Development (or his designee)

        A. Shall have overall responsibility for the validation process.

        B. Shall designate personnel to participate in the validation process.

        C. Shall resolve discrepancies identified during the validation process.

5.0 REPORTING REQUIREMENTS

None

6.0 VALIDATION BY CONTROL ROOM WALK-THROUGH

    6.1 Step-by-Step Walk-Through

        A. Personnel and Equipment Scheduling

        The OEDD or his designee will schedule a single operator
        familiar with the Control Room and preferably cold-certified as
        a minimum. This scheduling should be done to minimize impact on
        normal plant operations in the Control Room. The designated person
        shall have no other specific duties during the walk-through to allow
        his full attention to the validation. The Step-by-Step Walk-Through
        should be done prior to the Real-Time Walk-Through.

        B. Performing the Step-by-Step Walk-Through

        The personnel performing the walk-through should be familiar
        with the validation process and Attachment 1, Checklist For
        Validation by Step-by-Step Walk-Through. As the operator walks
        through each step of the procedure in the Control Room he should
        verify that each criterion under the "Adequate Guidance" and
        "Control Room Compatability" headings are met for each step.
        If one or more steps fail to meet a criterion, the operator
        writes "NO" on the checklist blank and completes Attachment 2
        to document the discrepancy(ies). The "Administrative Adequacy"
        section should be completed for the procedures as a whole and
        discrepancies documented in the manner described above.

        C. Resolution of Discrepancies

        The documentation associated with the validation process shall
        be forwarded to the OEDD (or designee) for resolution of
        discrepancies. The resolution of all discrepancies will be

documented on Attachment 2. The documentation of the Step-by-Step Walk-Through portion of the Validation Process shall accompany the procedure for final approval. It shall thereafter be retained as a part of the procedure process record in Master File.

6.2 Real-Time Walk-Through of Selected Scenarios

A. Personnel and Equipment Scheduling

The OEDD will schedule the following personnel to perform the real-time walk-through to minimize impact on normal plant operations in the Control Room:

1. Operator(s) familiar with the Control Room and preferably cold-certified as a minimum. These personnel should have no other concurrent duties during the performance of the walk-through. Selected Scenario(s) will be performed with minimum shift staff to identify crew interaction problems.

2. A minimum of 2 observers for the process who are supervisory personnel with no other concurrent duties. These observers should be familiar with the procedures, training and the validation process.

B. Preparing For the Walk-Through

1. Operator(s) involved should become familiar with the EP's to be validated prior to the walk-through. The operator should review the validation process and the Real-Time Walk-Through Validation Checklist (Attachment 3) to enable them to identify problem areas.

2. One observer to function as the "lead" observer should develop a plant condition or scenario to test the useability of the EP(s) to be validated. He may use several scenarios or sets of plant conditions to ensure the adequacy of the procedures. He will provide the operator(s) with plant parameters at decision points.

Both observers should review the validation process, the Real-Time Validation Checklist (Attachment 3) and the Validation Observation Form (Attachment 4) prior to the walk-through.

C. Conducting the Walk-Throughs

The operator acting as the Control Operator will walk and talk through the procedure while performing the required actions. The operator should provide the following information to the observers:

- Describe actions he is taking.
- Identify instruments used to take actions.
- Identify controls used.

- Identify expected system responses and how they are verified.
- Identify contingency actions taken.

If the operators identify a problem in using a procedure, they should point it out to the observers.

Both observers will identify problems the operators are having in performing the procedure using the Validation Observation Form (Attachment 4) as a guide.

The "lead" observer shall perform the following functions:

- Direct the walk-through
- Ask questions concerning use of the procedure
- Note problems encountered by operator(s).

The other observer(s) shall perform the following functions:

- Observe movement patterns of operator(s)
- Ask questions concerning use of the procedure
- Note problems encountered by operator(s).

D. Conducting Debriefing

Operator(s) and observers involved in the walk-through shall meet as soon as possible after the walk-through to analyze and summarize data.

The lead observer with input from the others involved will complete the Real-Time Walk-Through Validation Checklist. In the process of completing the Checklist, the problems encountered during the walk-through which prevent a criterion from being met shall be documented on the Discrepancy Form (Attachment 2). Possible solutions for the discrepancies should also be recommended by these personnel and included in the Discrepancy Form. All documentation shall then be forwarded to the OEDD or his designee.

E. Resolution of Discrepancies

The OEDD or his designee will resolve and initial all documented discrepancies on Attachment 2. The resolution of discrepancies will generally fall into 2 categories. These are (1) procedure revision and (2) provide additional or modified training. In rare instances, a Control Room design change may be in order. The documentation of the Real-Time Walk-Through portion of the Validation Process shall be maintained as a part of the procedure process record of the primary procedure used in the scenario.

7.0 VALIDATION BY ACTUAL PERFORMANCE

After implementation Emergency Procedures will be revised for useability based on their use during a real or simulated emergency. As soon as possible after use of an EP, the Shift Supervisor involved or training instructor conducting semi-annual walk-through shall ensure that any

problems encountered in using the EP are documented on Attachment 2 and forwarded to the OEDD. If no problems were encountered, he should complete Attachment 2 with "NONE" under the discrepancy headings. This requirement may be waived by the OEDD for some frequently used EP's.

8.0 VALIDATION OF CHANGES TO EMERGENCY PROCEDURES

A validation of EP's should be performed after any change to the Emergency Procedures following final approval. The requirement for a walk-through involving plant personnel may be waived by the OEDD or his designee by completing both the Step-by-Step and Real-Time Walk-Through Validation Checklists (Attachments 1 and 3).

Procedure Title:

Change Number:

Procedure Number:

Reviewer:

Date:

Review the procedure for each of the following criteria. If the procedure
meets a criterion, check on the line provided. If the criterion is not met,
write "NO" on the line. Write "N/A" if the criterion does not apply.

A.   Format

_____ 1.   The cover page includes the following correct information:

a.   Procedure title
b.   Procedure number and changes incorporated
c.   Station name

_____ 2.   The Table of Contents includes the following correct information:

a.   Procedure title
b.   Procedure name
c.   Case Titles (where applicable)
d.   Case page numbers (where applicable)
e.   Section headings
f.   Section page numbers

_____ 3.   Each page contains the following correct information:

a.   Procedure title
b.   Page number
c.   Procedure number and station designation
d.   Case title, if needed

_____ 4.   All pages of the procedure are present.

_____ 5.   Section headings standout from the text.

_____ 6.   Check-off or initial sign-off lines are provided.

_____ 7.   Steps are numbered correctly.

_____ 8.   Printed material contains outer margins of at least 1/2 inch. (i.e.
           printed borders are visible on all pages)

____ 9. Inner margins are large enough to prevent information from being obscured by the binding.

____ 10. All graphs, tables and charts in the text are legible.

____ 11. Caution statements are emphasized to standout from the text.

____ 12. Enclosures are easy to discriminate from text information.

____ 13. Enclosures are properly labeled.

____ 14. The general format of the Emergency Procedure is consistent with the Writer's Guide (i.e. two column format, required sections are present).

B. Style and Content

____ 1. Short words (of less than 10-12 characters) are used.

____ 2. Ambiguous words and phrases are avoided.

____ 3. Positive or affirmative sentences are used rather than negative ones, whenever possible.

____ 4. The text stipulates precisely what actions or decisions are required.

____ 5. The text is compatible with the operator's viewpoint and training.

____ 6. Only abbreviations, acronyms and symbols appearing in the Writer's Guide dictionary are used.

C. Administrative Adequacy

____ 1. The procedure has a unique and permanently assigned number.

____ 2. The procedure has a descriptive title.

____ 3. The purpose statement clearly specifies the function of the procedure.

____ 4. The procedure provides major symptoms of the emergency without being excessive.

____ 5. The use of referencing other procedures is used appropriately only to eliminate excessive detail.

____ 6. Precautions which must be observed are written in caution statements.

____ 7. Enclosures contain only information needed to accomplish the procedure.

____ 8. Informational material is written in note statements.

____ 9. The sequence of steps is logical and accurate.

____ 10. A list of all procedures referenced within this procedure was made.

Procedure Title:

Change Number:

Procedure Number:

Reviewer:

Date:

Review the procedure for each of the following criteria. If the procedure meets a criterion, check on the line provided. If the criterion is not met, write "NO" on the line. Write "N/A" if the criterion does not apply.

A. Format

_____ 1.   Caution and note statements do not contain action steps.

_____ 2.   Caution statements precede the applicable step.

_____ 3.   Note statements preceed the applicable step, when appropriate.

_____ 4.   Valve references include component number and nomenclature where necessary for clarity.

_____ 5.   Referenced procedures are identified by both title and number.

B. Style and Content

_____ 1.   Sentences are short (20 words or less).

_____ 2.   Steps appear as short concise statements (not paragraphs) and deal with only one idea.

_____ 3.   The action to be taken is specifically identified (open, close, rack in, etc.).

_____ 4.   Statements are written as follows: Action Verb ---- object.

_____ 5.   If there are more than three objects, they are listed.

_____ 6.   In conditional statements (IF ... THEN), the IF statements are listed first.

_____ 7.   Limits and tolerances are expressed quantitatively (930-940 PSIG, etc.) whenever possible.

C. Technical Decisions

_____ 1.   The instructions to "REFER TO" and "GO TO" other procedures are used correctly.

_____ 2.   The entry and exit conditions as listed in the procedure direct the operator to the correct step of the correct procedure.