

Docket Nos. 50-445/446

OCT 25 1982

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MEMORANDUM FOR: Dennis L. Ziemann, Chief  
 Procedures and Test Review Branch  
 Division of Human Factors Safety

THRU: H. Brent Clayton, Acting Section Leader  
 Section A - Procedures  
 Procedures and Test Review Branch  
 Division of Human Factors Safety

FROM: James W. Clifford  
 Section A - Procedures  
 Procedures and Test Review Branch  
 Division of Human Factors Safety

SUBJECT: SUMMARY OF MEETING WITH TEXAS UTILITIES GENERATING  
 COMPANY (TUGCO) ON THE COMANCHE PEAK PROCEDURES  
 GENERATION PACKAGE - SEPTEMBER 13, 1982

On September 13, 1982, a meeting was held with TUGCO, at their request, to discuss the Comanche Peak Emergency Operating Procedures (EOP) Program for meeting the requirements of TMI Action Plan Item I.C.1, "Guidance for the Evaluation and Development of Procedures for Transients and Accidents." We provided comments, which are included in this meeting summary, on the Procedures Generation Package (PGP) portion of the EOP program. Discussion also included the status of the review for Section 15.3.9, "Anticipated Transients Without Scram," Section 22, Item I.C.1, "Guidance for the Evaluation and Development of Procedures for Transients and Accidents," and Section 22, Item I.C.8, "Pilot Monitoring of Selected Emergency Procedures for Near-Term Operating License Applicants" of NUREG-0797, "Safety Evaluation Report related to the operation of Comanche Peak Steam Electric Station, Units 1 and 2." The attendees of the meeting are identified in Enclosure 1. The material presented by TUGCO is provided in Enclosure 2.

DISCUSSION

A description of the Westinghouse generic technical guidelines was presented. The guidelines consist of two distinct parts: (1) Optimal Recovery Guidelines (ORG), and (2) Function Restoration Guidelines (FRG). Following a reactor trip or reactor trip condition, the diagnostic emergency response guideline (one of the ORGs) is used. If diagnosis of the initiating event is possible, event-specific procedures or emergency contingency actions are used. Throughout the operator response to the initiating event, or if event

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diagnosis is not possible, the critical safety function status trees are used to determine the status of the six basic functions. If any of the functions are not being restored through automatic equipment operation or by use of the ORG, the FRGs are used to restore the specific function.

TUGCO is closely following the Westinghouse generic technical guidelines in developing their plant-specific technical guidelines. Since there are no significant design deviations from the generic technical guidelines, TUGCO is using the Westinghouse analytic base and technical validation and will not be performing an independent, plant-specific guideline validation. A review of each technical guideline is being performed for data verification. This review will be documented to provide an audit trail. An independent verification of the technical guideline is to be performed, and the plant-specific technical guidelines are to be reviewed by plant management.

The INPO "Emergency Operating Procedures Writing Guideline," dated July 1982, is being used as a basis for writing the Comanche Peak EOP writer's guide. TUGCO stated that this incorporates the necessary human factors considerations into the procedure development process.

The process of the EOP verification was described. Throughout the process, TUGCO is using SRO-certified personnel, who will continually interface with plant operators, to develop the EOPs, to develop verification evaluation criteria, and to conduct control room walk-throughs of each procedure. Additional comments developed during the training process and during actual plant operation are to be evaluated and incorporated, if appropriate, into the procedures.

The objectives of the operator training program for EOPs were discussed with L. Bender of LQB. It was determined that NRC review criteria for this area need to be more clearly defined. A conference call including training personnel from the site, LQB, and PTRB representatives will be set up in the near future to discuss the applicant's training methods and NRC's evaluation criteria.

STAFF COMMENTS

The program described by TUGCO appears to contain the basic elements for development of an adequate PGP. A final conclusion regarding acceptability of the PGP will not be possible until the elements of the TUGCO program are completed and their PGP is submitted for staff review. The staff feels, however, that TUGCO has done a commendable job in determining the elements and information needs for their PGP.

The following comments were provided at the meeting on specific sections of the PGP:

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A. Technical Guidelines

1. The review of each guideline should include an engineering evaluation, or analysis, rather than consist entirely of a review to ensure accurate data. TUGCO personnel stated that an engineering evaluation was performed by plant engineers, and only plant-specific data changes were found to be necessary. This was due primarily to the similarity of the Comanche Peak design to the reference plant on which the guidelines are based. Because of this similarity, the engineering evaluation performed by TUGCO appears to be sufficient for developing their plant-specific technical guidelines.
2. The technical guidelines portion of the PGP should include documentation of the applicant's evaluation of the applicability of the generic guidelines, with any additional plant-specific analyses due to design deviations from the reference plant. This step is necessary to supplement the WOG validation to confirm the plant-specific applicability of the generic technical guidelines.

B. Writer's Guide

1. Although TUGCO is using INPO guidance to develop their plant-specific writer's guide, we stated that it would be beneficial to include a human factors specialist in the procedures development process. We feel human factors expertise, even with the existence of a writer's guide, is as necessary to the team developing procedures as engineering and operations expertise, who would use technical guidelines as the starting point for their work. We encouraged TUGCO to use a Human Factors specialist in their program.

C. Verification

1. Use of simulator training in the verification process should be formalized and included as part of the validation of the technical guidelines. This effort should include a well-defined feedback mechanism for lessons learned during the training process or during actual plant operations.

LICENSING CONSIDERATIONS

TUGCO requested that the staff consider closing out TMI Action Plan Item I.C.8 and writing Item I.C.1 as confirmatory, based on the program described in the meeting.

The staff stated that I.C.1 would have to remain an open item until the remainder of the Westinghouse guidelines were submitted, by Westinghouse, then reviewed and approved by the staff. Because of the delays already experienced in the Westinghouse generic technical guideline development program, the staff's opinion is that Item I.C.8 should remain open to

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| OFFICE  | ensure the availability of the Pilot Monitoring Review program as a means |  |  |  |  |
| SURNAME | to allow Comanche Peak to receive a full power license if further delays  |  |  |  |  |
| DATE    | in completing the Westinghouse guidelines are experienced.                |  |  |  |  |

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The staff reminded TUGCO that the reactivity control, or ATWS, procedure must be submitted, when available, to allow completion of the review of Section 15.3.9, "Anticipated Transient Without Scram."

Original signed by

James W. Clifford  
Section A - Procedures  
Procedures and Test Review Branch  
Division of Human Factors Safety

Enclosures:

- 1. List of Attendees
- 2. TUGCO's Presentation

cc w/enclosure:

- S. Burwell
- J. Youngblood
- L. Bender
- M. Goodman
- D. Fadden (INPG)
- R. Haskovec (TUGCO)
- R. Bird (TUGCO)
- M. Aneshansley (TUGCO)
- D. Kelley (Resident Inspector)
- R. Taylor (Resident Inspector)

|         |               |           |  |  |  |  |  |
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| OFFICE  | DHFS:PTRB     | DHFS:PTRB |  |  |  |  |  |
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| DATE    | 10/27/82      | 10/25/82  |  |  |  |  |  |

ENCLOSURE 1

NRC/TUGCO MEETING

SEPTEMBER 13, 1982

DISCUSS PROCEDURES GENERATION PACKAGE

TUGCO

M. Aneshansley  
R. Haskovec  
R. Bird

General Physics Corporation

E. Shewbridge  
A. Lofard

INPO

D. Fadden

NRC

J. Clifford  
M. Goodman  
B. Clayton  
L. Bender

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ENCLOSURE 2

- I. INTRODUCTION
- II. LOGIC AND STRUCTURE OF WESTINGHOUSE GENERIC GUIDELINES
- III. COMANCHE PEAK EMERGENCY PROCEDURES GENERATION PACKAGE
  - o DEVELOPMENT OF PLANT SPECIFIC TECHNICAL GUIDELINES
  - o PLANT SPECIFIC WRITER'S GUIDE
  - o VERIFICATION PROGRAM
  - o OPERATOR TRAINING OBJECTIVES
- IV. SUMMARY
- V. QUESTIONS AND ANSWERS

LOGIC AND STRUCTURE OF WESTINGHOUSE GENERIC  
TECHNICAL GUIDELINES

- o TWO DISTINCT TYPES
  - (1) OPTIMAL RECOVERY GUIDELINES (ORG)/EMERGENCY CONTINGENCY ACTIONS (ECA)
  - (2) CRITICAL SAFETY FUNCTION STATUS TREES (CSFST)/FUNCTION RESTORATION GUIDELINES (FRG)
  
- o ORG SET CONSISTS OF:
  - EMERGENCY RESPONSE (DIAGNOSTIC) - E-SERIES
  - EVENT SPECIFIC - ES-SERIES
  - EMERGENCY CONTINGENCY ACTIONS ~~—~~ ECA SERIES
  
- o CRITICAL SAFETY FUNCTIONS
  - 6 BASIC FUNCTIONS
  - KEYED TO MAINTENANCE OF CLASSICAL BARRIERS
  - DISPLAYED ON SPDS FOR CONTINUOUS USE
  - TYPICALLY USED BY SUPERVISOR AS MONITORING TOOL
  - RESTORATION OF CSF ACCOMPLISHED VIA FRGs
  
- o SEE FIGURE FOR FLOW CHART

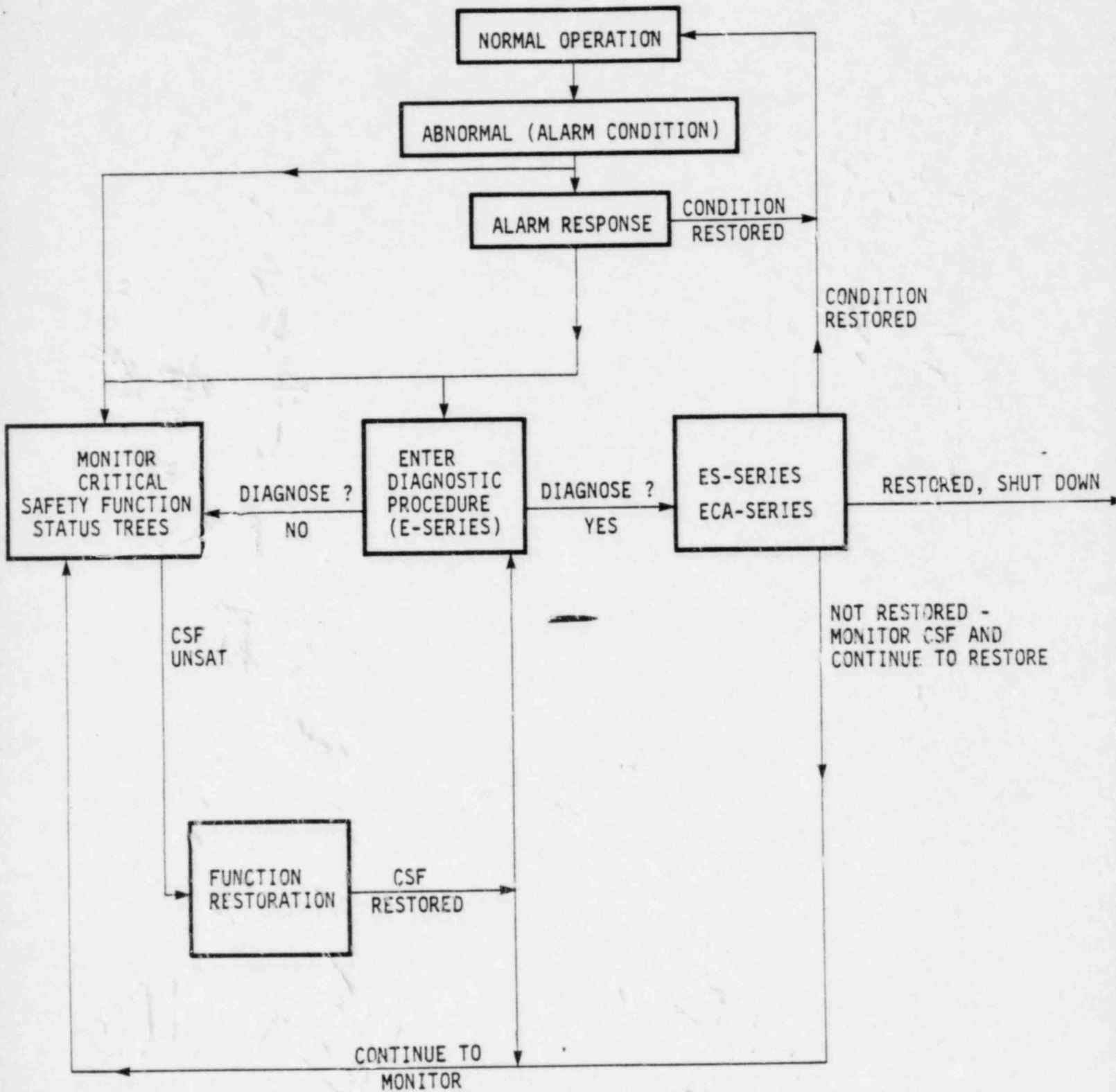


FIGURE 1

EMERGENCY RESPONSE FLOW CHART



COMANCHE PEAK EMERGENCY  
PROCEDURES GENERATION PACKAGE

- o PROGRAM TO DEVELOP PLANT SPECIFIC TECHNICAL GUIDELINES FROM WESTINGHOUSE GENERIC GUIDELINES
- o PLANT SPECIFIC WRITER'S GUIDE
- o VERIFICATION PROGRAM  
GENERIC GUIDELINES VERIFIED BY WESTINGHOUSE PROCEDURES TO BE VERIFIED BY TUGCO
- o OPERATOR TRAINING OBJECTIVES

DEVELOPMENT OF COMANCHE PEAK SPECIFIC  
TECHNICAL GUIDELINES

- o W OWNER'S GROUP (WOG) AND NRC APPROVED GENERIC GUIDELINES PROVIDE A COMPLETE AND DOCUMENTED ANALYTICAL BASIS FOR EACH EOP.
- o GENERIC GUIDELINES HAVE BEEN VALIDATED BY THE WOG
- o ALL CHANGES ARE CONTROLLED
- o APPROACH TO DEVELOPMENT OF PLANT SPECIFIC TECHNICAL GUIDELINES AND MAINTAIN THE FIDELITY OF OUR ANALYTICAL BASIS.
  - (1) REVIEW EACH GUIDELINE AND PROVIDE PLANT SPECIFIC DATA CHANGES
  - (2) DOCUMENT EACH PLANT SPECIFIC DATA SOURCE/CHANGE ENTERED BY A RESPONSIBLE ENGINEER
  - (3) REQUIRE INDEPENDENT VERIFICATION OF DATA/CHANGE
  - (4) PLANT SPECIFIC DATA/CHANGES WILL BE APPROVED BY RESPONSIBLE PLANT MANAGEMENT
  - (5) THE ABOVE HAS BEEN IDENTIFIED AS THE "COMANCHE PEAK DATA PACKAGE" AND WILL BE A QA RECORD

## COMANCHE PEAK EOP WRITER'S GUIDE

- o PROVIDES GUIDANCE FOR DEVELOPING OPERATING PROCEDURES FROM GUIDELINES
  - o ENSURES CONSISTENCY AMONG PROCEDURES
  - o ESTABLISHES FORMAT AND HUMAN FACTORS REQUIREMENTS
  - o ASSURES MECHANICS OF STYLE REMAIN CONSISTENT OVER THE LONG RUN (SEVERAL DIFFERENT AUTHORS)
-

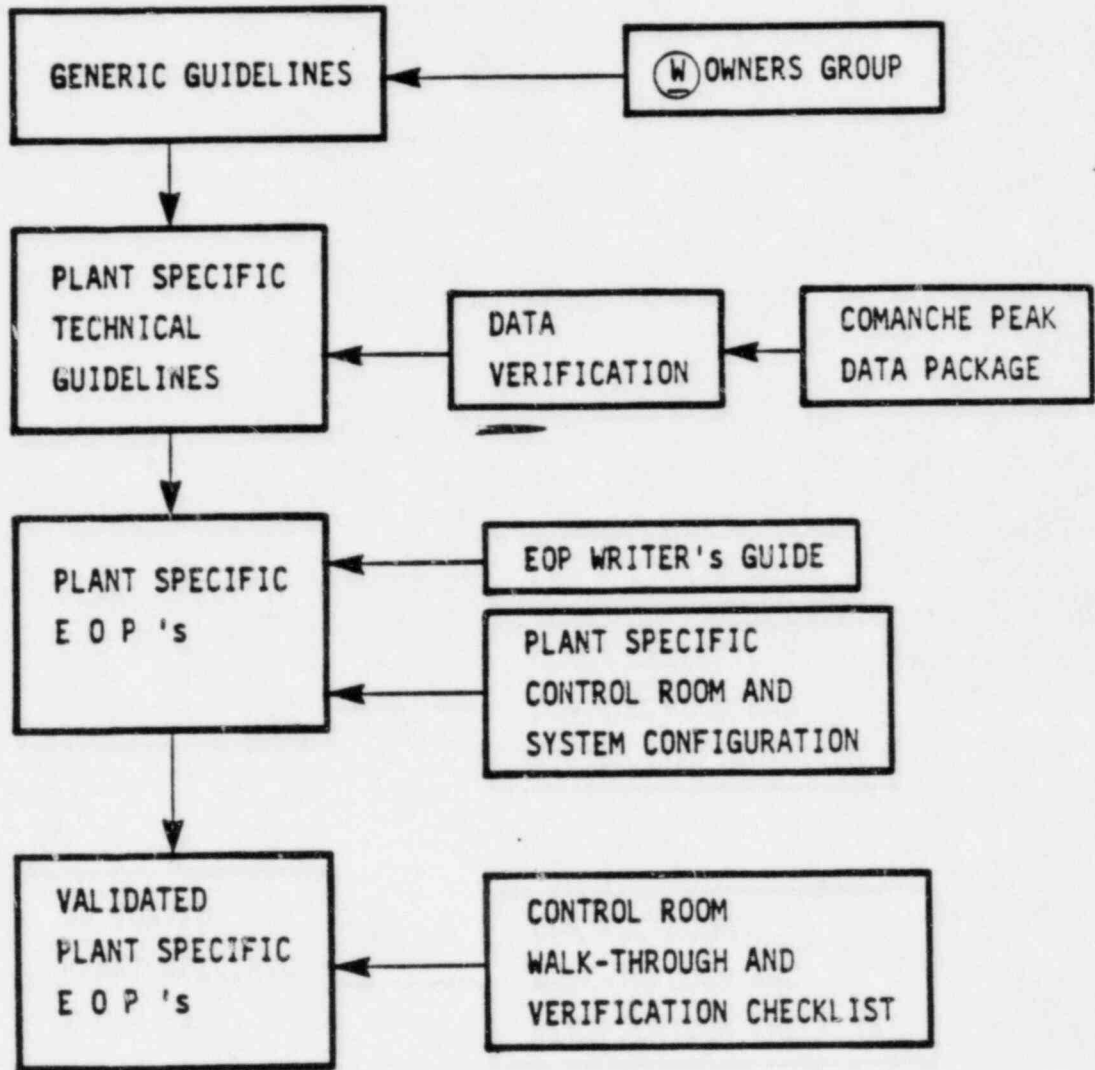
## EMERGENCY PROCEDURES VERIFICATION

- o PREPARED BY 520 PERSONNEL
- o TECHNICAL REVIEW BY OTHER SRO PERSONNEL
- o USE WALKTHROUGH CHECKLIST
- o CONTROL ROOM WALKTHROUGH OF EACH PROCEDURE
- o INCORPORATE COMMENTS/ERRORS IDENTIFIED THROUGH TRAINING AND/OR  
ACTUAL USE

## OPERATOR TRAINING OBJECTIVES

- o PROVIDE BACKGROUND ON DEVELOPMENT PROCESS
  - o PROVIDE OVERALL EMERGENCY RESPONSE TRAINING - USE ALL TDDLs SUCH AS SPDS, ALARM RESPONSE AND EOPs
  - o DEVELOP A DETAILED, WORKING KNOWLEDGE OF EACH PROCEDURE AND HOW IT FITS INTO THE OVERALL SCHEME
  - o PROVIDE A MECHANISM FOR FEEDBACK TO ASSURE ERROR CORRECTION
  - o ACCOMPLISHED VIA CLASSROOM LECTURES, GROUP DISCUSSIONS, CONTROL ROOM WALKTHROUGHS AND ON SIMULATOR (WHEN AVAILABLE)
-

SUMMARY



SUMMARY (CON'T)

- o COMANCHE PEAK EMERGENCY OPERATING PROCEDURES PROGRAM DEVELOPED FROM:
  - NUREG 0899
  - INPO RECOMMENDATIONS
  - W GENERIC GUIDELINES
  
- o W GENERIC GUIDELINES DEVELOPED TO NUREG 0737, ITEM I.C.1, AND ACCEPTED BY NRC.
  
- o METHODOLOGY USED TO MAKE GENERIC GUIDELINES PLANT SPECIFIC WAS DESIGNED TO PRESERVE THE ANALYTICAL BASIS AND VALIDATION PROGRAM.
  
- o METHODOLOGY USED TO TRANSFORM GUIDELINES TO PROCEDURES IS CONSISTENT WITH ALL KNOWN REQUIREMENTS/RECOMMENDATIONS.
  
- o THEREFORE, THE COMANCHE PEAK PROGRAM SATISFIES THE REQUIREMENTS OF ITEM I.C.1 AND OTHER RECOMMENDATIONS AND WILL PROVIDE THE OPERATIONS STAFF WITH GUIDANCE SUFFICIENT TO PROPERLY RESPOND TO PLANT UPSET CONDITIONS.