UNITED STATES

### NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TEXAS 76011 8064

FEB - 7 1996

Entergy Operations, Inc.

ATTN: Harry W. Keiser, Executive

Vice President & Chief Operating Officer

P.O. Box 31995

Jackson, Mississippi 39286-1995

SUBJECT: ENTERGY OPERATIONS, INC., ENGINEERING/MAINTENANCE PRESENTATIONS

This refers to the meeting conducted in the Region IV office on January 19. 1996. This meeting related to familiarizing Region IV personnel with changes in the engineering change control. maintenance, and commitment change processes. Your presentations were beneficial to our understanding of these programs and will contribute to our inspections in these areas. Specifically, we look forward to reviewing the new methods you have developed to respond to engineering requests. Such performance-based inspections will verify that the new process meets the design control requirements of 10 CFR 50. Appendix B.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2. Title 10. Code of Federal Regulations. a copy of this letter will be placed in the NRC's Public Document Room.

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

Thomas P. Gwym, Director Division of Reactor Safety

Enclosures:

Attendance List

2. Licensee Presentation

Dockets: 50-313

50-368

50-416

50-458

50-382

Licenses: DPR-51

NPF-6

NPF - 29 NPF - 47

NPF - 38

9602220237 960207 PDR ADOCK 05000313 PDR cc w/Enclosure 1; w/o Enclosure 2: Entergy Operations, Inc. ATTN: J. W. Yelverton, Vice President Operations, Arkansas Nuclear One 1448 S.R. 333 Russellville, Arkansas 72801-0967

Entergy Operations. Inc. ATTN: C. R. Hutchinson, Vice President Operations - Grand Gulf P.O. Box 756 Port Gibson, Mississippi 39150

Entergy Operations, Inc.
ATTN: John R. McGaha, Vice President Operations, River Bend Station
P.O. Box 220
St. Francisville, Louisiana 70775

Entergy Operations, Inc. ATTN: Ross P. Barkhurst, Vice President Operations, Waterford P.O. Box B Killona, Louisiana 70066

Entergy Operations, Inc. ATTN: Jerrold G. Dewease, Vice President Operations Support P.O. Box 31995 Jackson, Mississippi 39286

Wise, Carter, Child & Caraway ATTN: Robert B. McGehee, Esq. P.O. Box 651 Jackson, Mississippi 39205

County Judge of Pope County Pope County Courthouse Russellville, Arkansas 72801

Winston & Strawn ATTN: Nicholas S. Reynolds, Esq. 1400 L Street, N.W. Washington, D.C. 20005-3502 B&W Nuclear Technologies ATTN: Robert B. Borsum Licensing Representative 1700 Rockville Pike, Suite 525 Rockville, Maryland 20852

Mississippi Department of Natural Resources ATTN: Sam Mabry, Director Division of Solid Waste Management P.O. Box 10385 Jackson, Mississippi 39209

Claiborne County Board of Supervisors ATTN: President Port Gibson, Mississippi 39150

Bechtel Power Corporation ATTN: Mr. K. G. Hess P.O. Box 2166 Houston, Texas 77252-2166

Bechtel Power Corporation ATTN: N. G. Chapman, Manager 9801 Washington Boulevard Gaithersburg, Maryland 20878

Entergy Operations, Inc. ATTN: D. L. Pace, Grand Gulf Nuclear Station General Manager P.O. Box 756 Port Gibson, Mississippi 39150

The Honorable William J. Guste, Jr. Attorney General Department of Justice State of Louisiana P.O. Box 94005 Baton Rouge, Louisiana 70804-9005

Office of the Governor State of Mississippi Jackson, Mississippi 39201

Mike Moore, Attorney General Frank Spencer, Asst. Attorney General State of Mississippi P.O. Box 22947 Jackson, Mississippi 39225

State Board of Health ATTN: Dr. F. E. Thompson, Jr. State Health Officer P.O. Box 1700 Jackson, Mississippi 39205

Entergy Operations, Inc.
ATTN: Michael J. Meisner, Director
Nuclear Safety
and Regulatory Affairs
P.O. Box 756
Port Gibson, Mississippi 39150

Entergy Operations, Inc. ATTN: Michael B. Sellman, General Manager Plant Operations P.O. Box 220 St. Francisville, Louisiana 70775

Entergy Operations, Inc.
ATTN: James J. Fisicaro, Director
Nuclear Safety
River Bend Station
P.O. Box 220
St. Francisville, Louisiana 70775

Entergy Operations, Inc. ATTN: Otto P. Bulich, Manager Nuclear Licensing P.O. Box 220 St. Francisville, Louisiana 70775

The Honorable Richard P. Ieyoub Attorney General P.O. Box 94095 Baton Rouge, Louisiana 70804-9095 H. Anne Plettinger 3456 Villa Rose Drive Baton Rouge, Louisiana 70806

President of West Feliciana Police Jury P.O. Box 1921 St. Francisville, Louisiana 70775

Cajun Electric Power Coop. Inc. ATTN: Larry G. Johnson. Director Systems Engineering 10719 Airline Highway P.O. Box 15540 Baton Rouge, Louisiana 70895

William H. Spell, Administrator Louisiana Radiation Protection Division P.O. Box 82135 Baton Rouge, Louisiana 70884-2135

Entergy Operations, Inc. ATTN: D. R. Keuter, General Manager Plant Operations P.O. Box B Killona, Louisiana 70066

Entergy Operations, Inc. ATTN: Donald W. Vinci Licensing Manager P.O. Box B Killona, Louisiana 70066

Chairman Louisiana Public Service Commission One American Place, Suite 1630 Baton Rouge, Louisiana 70825-1697

Entergy Operations. Inc. ATTN: R. F. Burski, Director Nuclear Safety P.O. Box B Killona, Louisiana 70066

Parish President St. Charles Parish P.O. Box 302 Hahnville, Louisiana 70057 Mr. William A. Cross Bethesda Licensing Office 3 Metro Center Suite 610 Bethesda, Maryland 20814

bcc to DMB (IE45) bcc distrib. by RIV:

bcc distrib. by RIV w/enclosures:

L. J. Callan Branch Chief (DRP/C) MIS System RIV File Project Engineer (DRP/C) Branch Chief (DRP/D)

DRS-PSB Branch Chief (DRP\TSS) Resident Inspector (River Bend) Project Engineer (DRP/D) Resident Inspector (Waterford-3) Senior Resident Inspector (Grand Gulf) Senior Resident Inspector (Cooper)

W wunter

Resident Inspector (Arkansas Nuclear One)

Leah Tremper (OC/LFDCB, MS: TWFN 9E10)

DOCUMENT NAME:

To receive copy of document, indicate in box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

RIV:RI:MB	C:MB	C:EBONI	٤	D:DRS	N	
CJPaulk C	DAPowers Co	C:EB CAVanDerburgh		TPGwynn	L.Vn	
01/24/96	01/24/96	01/14/96		0/2/9	6	

OFFICIAL RECORD COPY

bcc to DMB (IE45) bcc distrib. by RIV:

bcc distrib. by RIV w/enclosures:

L. J. Callan

Branch Chief (DRP/C)

MIS System

RIV File

Project Engineer (DRP/C)

Branch Chief (DRP/D)

Resident Inspector (Waterford-3)

Senior Resident Inspector (Grand Gulf)

Senior Resident Inspector (Cooper)

Resident Inspector (Arkansas Nuclear One) Leah Tremper (OC/LFDCB, MS: TWFN 9E10) DRS-PSB Branch Chief (DRP\TSS) Resident Inspector (River Bend) Project Engineer (DRP/D)

### ENCLOSURE 1

### ATTENDANCE LIST

### 1 LICENSEE PERSONNEL

### 1.1 Entergy

E. Rogers, Project Manager, Maintenance Support

F. Titus, Vice President Engineering J. Yelverton, Chief Operating Officer

### 1.2 Arkansas Nuclear One

B. Allen, Maintenance Manager, Unit 1

S. Bennett, Licensing Engineer

M. Harris, Maintenance Manager, Unit 2 R. Lane, Director, Design Engineering

D. McKenney, Supervisor, System Engineering

D. Mims, Director, Licensina

### 1.3 Grand Gulf Nuclear Station

D. Bost, Director, Design Engineering

R. Moomaw, Maintenance Manager

L. Moulder, Technical Coordinator, Maintenance

### 1.4 River Bend Station

E. Ewing, Maintenance Manager

T. Leonard, Director, Design Engineering

### 1.5 Waterford Steam Electric Station, Unit 3

B. Azzarello, Director, Design Engineering

J. Hoffpauir, Maintenance Manager C. Thomas, Licensing Supervisor

### NRC PERSONNEL

J. Donohew, Project Engineer, Office of Nuclear Reactor Regulation

J. Dyer, Director, Division of Reactor Projects (DRP) T. Gwynn, Director, Division of Reactor Safety (DRS) P. Harrell, Chief, Project Branch D. DRP

C. Johnson, Reactor Inspector, Maintenance Branch, DRS

C. Paulk, Reactor Inspector, Maintenance Branch, DRS K. Perkins, Director, Region IV Walnut Creek Field Office, DRP

D. Powers, Chief, Maintenance Branch, DRS T. Reis, Acting Chief, Project Branch C. DRP

L. Smith. Reactor Inspector. Engineering Branch, DRS C. VanDenburgh, Chief, Engineering Branch, DRS

## Entergy Operations, Inc.

Engineering Request Process January 19, 1996



# Engineering Request Process

- Introduction / Purpose
- Background / Approach
- New Process Attributes
- Implementation Status / Plans
- Discussion / Questions

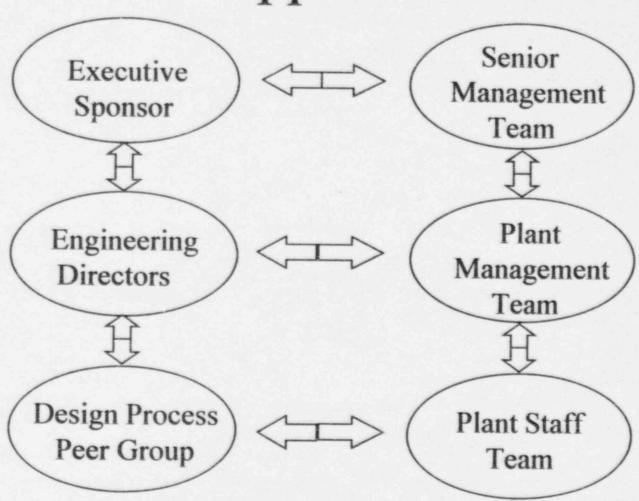


# The Basis for Change

- Increase Focus on Plant Safety and Performance
- Improve Human Performance
- Reduce Costs While Maintaining High Safety Standards
- Standardize Engineering Processes to Enhance Sharing of Resources



### Approach





# Peer Group Approach

- Restraints / Guiding Principles
  - Enhance Safety
  - Compatible with 10CFR50 Appendix B / Regulatory Requirements
- Industry Initiatives / Experience
  - EPRI Guidelines
  - Benchmarking
- Independent Thinking



### Attributes of the New Process

- One Request
- Utilization of Engineering Screening
- Graded Approach
  - Engineering Reply
  - Administrative Change
  - Commercial Change
  - Engineering Evaluation
  - Nuclear Change
- Timely Responses



# Engineering Reply

- Provides an answer to a question
- Interprets / communicates existing requirements
- Does not change existing plant configuration or documentation
- Examples:
  - Clarification on a technical issue
  - Communication of the results of a project scoping study



## Administrative Change

- Editorial and Non-Technical Changes
- Correction of Discrepancies
  - Obvious (e.g., spelling, typo, number corrections, etc.)
  - Discrepancies between design documents where evaluation is not required
- Examples:
  - Correct errors of omission (where necessary information can be obtained from another approved design document)
  - Add clarification without changing intent



# **Engineering Screening**

- Ensures Design Bases & Programmatic
   Commitments are Considered / Addressed
- Identifies Required Inputs & Reviews
- · Results in:
  - Graded level of documentation
  - Reduction in unneeded reviews
  - Programmatic screening performed early in process



### Commercial Change

- Commercial Equipment Criteria
  - Not Safety Related
  - Minimal Impact to SAR
  - Not Subject to Special Considerations (e.g., trip or transient sensitive)
  - Controlled by Design Engineering
- Streamlined Documentation
- Appropriate Level of Reviews
- Installation Flexibility
- Appropriate Configuration Control
- Potential Examples:
  - Turbine building crane
  - Heat exchanger maintenance valves
- Remote annunciator panels
- Turbine building ventilation



### **Engineering Evaluation**

- Provide design information that does not exist elsewhere for an existing SSC
- Evaluate conditions that do not conform to existing design documents
- · No addition or deletion of SSCs
- Examples:
  - Evaluate repair methods
  - Evaluate part / equipment substitutions
  - Evaluate technical issues not within the scope of the Reply or Administrative Change response types



### Nuclear Change

- Additions or deletions of SSCs not classified as commercial
- Changes to plant configuration beyond the scope of an Engineering Evaluation or Commercial Change
- One process for major & minor Nuclear Changes
- Graded documentation and review based on engineering screening results
- Examples:
  - Addition of a new feedwater control system
  - Safety related piping additions



# Documentation Requirements

	Engineering Reply	Administrative Change	Commercial Change	Engineering Evaluation	Nuclear Change
ER Form	X	X	X	X	X
Response	X	X	X	X	X
Reference Information (as needed)	X	X	x	X	Х
Design Document Review (for impact)		X	Х	X	X
Engineering Review		X	X	X	X
Engineering Screening			X	X	Х
Engineering Approval			X	X	X
Engineering Instructions			Х	X	X
10CFR50.59			X	AR	X
ANSI Design Inputs			***************************************	AR	AR
ANSI Independent Verification				AR	AR

X - Required

AR - As Required



### Implementation Plan & Status

- Guidelines and Site Specific Procedures
- Training
- Self Assessment



# Implementation Status

	JAN	FEB	MAR	APR	MAY	JUN
ANO	Phase I - Reply & Eng Eval - 2					
	Phase II - Commercial & Nuclear Change - 6/1/96					
W-3	Full Implementation - 5/1/96					
GGNS	Full Implementation - 4/1/96					
RBS		se I Complete min, Eval & C	d 12/15/95 ommercial Cha	inges)		
	Phase II -Nuclear Changes - 4/15/96					

# Integrated Maintenance Program Entergy Operations



# The Need for Change

- Create an Entergy Operations standard
- Reduce costs while maintaining a high safety standard
- Reduce the administrative burden
- Lay a foundation for sharing resources and good practices
- Streamline the maintenance process



### Vision

Entergy Operations Maintenance will be a multi-site integrated team achieving high plant availability and equipment reliability in a safe and cost efficient manner. Through innovative thinking and aggressive change, Maintenance will play an increasing role in the new environment

# Integrated Maintenance Program

- Maintenance process will be common at all EOI sites
- Administrative guidance will be common at all EOI sites
- Expectations for work practices will be common at all EOI sites



### Development Process

- Maintenance Managers planning meetings
- Key Process Team
- · Thorough review of industry standards
  - Appendix B QA programs
  - Regulatory Guides/ANSI Standards
    - Primarily RG 1.33/ANSI N18.7
  - INPO standardized processes
- Benchmarking



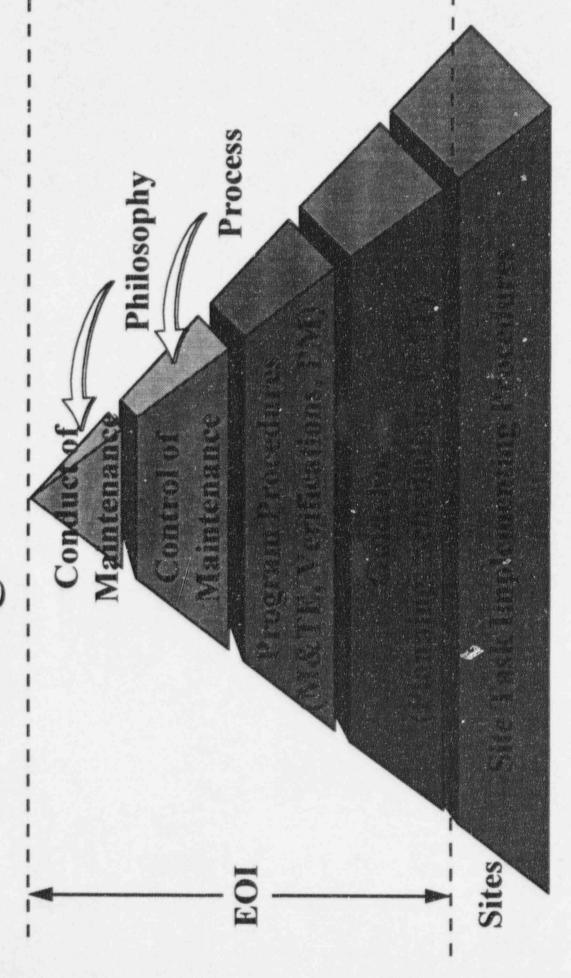
## Major Requirements

- Permanent Records
  - Activity affects safety function
  - Work on EQ or ASME
  - Activity changes plant configuration
  - Activity required by
     Tech Specs
  - Activity is otherwise considered significant

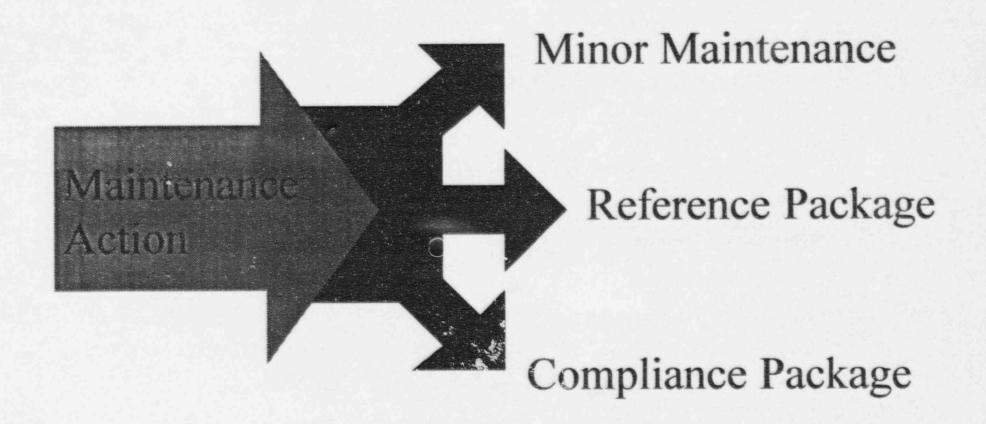
- Procedure Required
  - Activity is beyond the skill of the craft
  - Activity is complex
  - Activity could cause a plant trip or safety system actuation
  - Regulatory
     requirement (RG 1.33)

ENTERGY

# Program Structure



# Work Control Spectrum



Applies to Corrective Maintenance and Repetitive Tasks

### Minor Maintenance

- Does not require a record that will be retained in permanent plant files
- Activity does not require written procedure or instructions
- Worker expected to use appropriate resources
- Record of work maintained in electronic database as appropriate

### Examples

- PM on BOP equipment
- Tighten tubing fittings
- Packing adjustments
- · Replace annunciator cards
- Replace a pressure indicator



## Reference Package

- Record will be maintained in permanent plant files
- Activity does not require written procedure or instructions
- Worker expected to use appropriate resources



# Examples

- Safety related MOV limit switch adjustment
- Replace disc on manual valve
- Minor PM on safety related equipment
- EQ elastomer replacement
- · Replace a circuit board



### Compliance Package

- Record will be maintained in permanent plant files
- Activity requires written procedure or work instructions
- Current practice for virtually all work

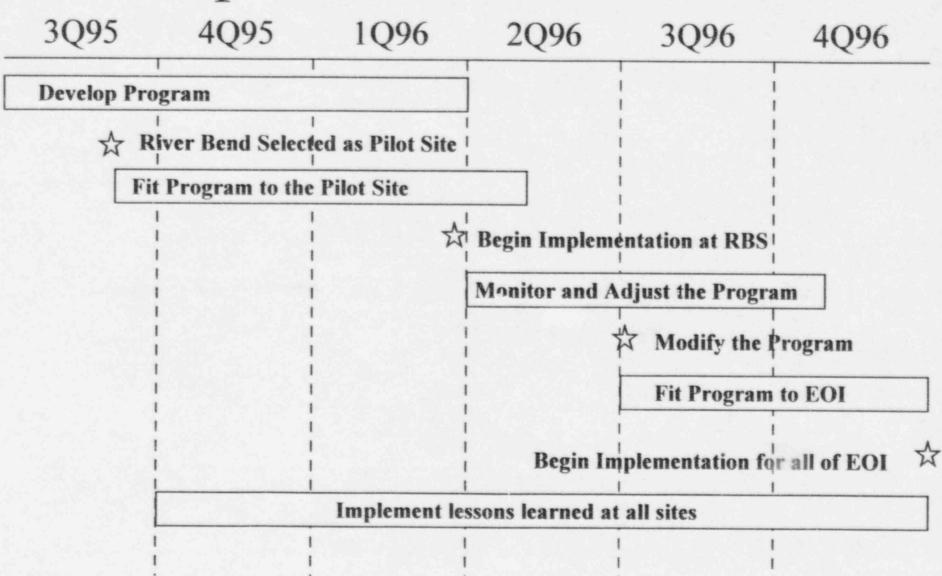


### **Major Considerations**

- Integration of procedures and guidelines
- Retain the good practices and strengths
- Implementation of Maintenance Rule
- Commitment changes
- Plant Review Committees
- Training
- Check and Adjust



### Implementation Schedule



### Summary

- Common guidance for Maintenance
- Graded process based on fundamental requirements
- · Implementation process beginning this year



# Commitment Change Process



## ENDORSED BY THE NRC

NRC Input

Pilot Program

SECY Paper



### FIVE STEP DECISION PROCESS

Change Process Codified?

Change Significant to Safety?

Commitment Necessary for Compliance?

NRC Relied Upon Original Commitment?

Commitment Minimizes Recurring Condition?

Change Process Codified?

- YES, Apply Codified Process
- NO, Proceed to Decision Step 2



Change Significant to Safety?

- YES, Apply 10CFR50.92 Criteria
- NO, Proceed to Decision Step 3



Commitment Necessary for Compliance to Obligation?

- YES, Change Preserves Compliance?
- NO, Proceed to Decision Step 4



NRC Relied Upon Original Commitment?

YES, Original Commitment Implemented?

NO, Proceed to Decision Step 5



Commitment Minimizes Recurring Condition?

- YES, Needed to Minimize Recurrence?
- NO, Change Commitment



### REPORTS AND DOCUMENTATION

**Timely Notification** 

Periodic Reports

Documentation

Issue Sensitivity



### EXPERIENCE AT ENTERGY OPERATIONS

Waterford 3

River Bend Station

**Grand Gulf Nuclear Station** 

Arkansas Nuclear One



### SUMMARY

Endorsed by NRC

Five Step Decision Process

Experience at Entergy Operations

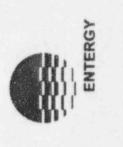
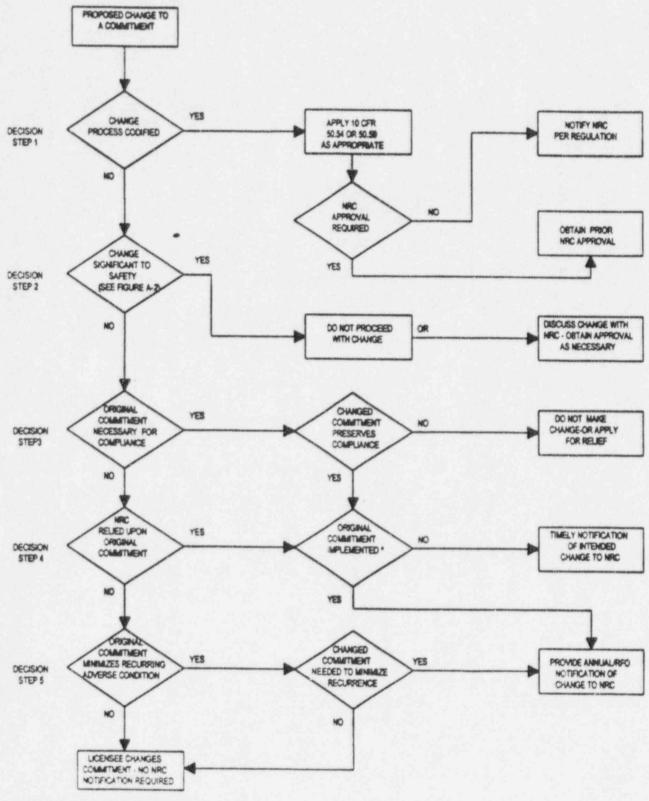


FIGURE A-1
COMMITMENT MANAGEMENT CHANGE PROCESS



<sup>.</sup> FOR LONG-TERM CORRECTIVE ACTION COMMITMENTS MADE IN RESPONSE TO A NOTICE OF WOLATION, SEE PAGE 10

### FIGURE A-3 COMMITMENT EVALUATION SUMMARY

Original Commitment Description:  Source Document:Tracking Number			
		1.	Is a codified commitment revision process applicable and completed (i.e., 10 CFR 50.59, or 10 CFR 50.54)?  No. Continue with STEP 2.  Yes. EXIT PROCESS*. Use codified process.
		2.	Could the change negatively impact the ability of an SSC to perform its safety function or negatively impact the ability of licensee personnel to ensure the SSC is capable of performing its intended safety function?  No. Continue with STEP 3. Briefly describe rationale: **
	Yes. Perform a safety evaluation using 10 CFR 50.92 criteria and attach a copy. Does a significant hazards consideration exist?  Yes. EXIT PROCESS*. Do not proceed with revision, OR discuss change with NRC and obtain any necessary approvals.  No. Continue with STEP 3.		
3.	Was original commitment necessary for compliance with an Obligation (i.e., rule, regulation, order or license condition)?  No. Continue with STEP 4.  Yes. Does the revised commitment preserve compliance?  No. EXIT PROCESS*. Do not make change, OR apply for appropriate regulatory relief.  Yes. Briefly describe rationale:**		

3.	(Continued)
	Has the original commitment been implemented?  No. EXIT PROCESS*. Provide timely notification of revised commitment to NRC.  Yes. EXIT PROCESS*. Notify NRC of revised commitment in next annual/RFO interval summary report.
4.	Was the original commitment (1) explicitly credited as the basis for a safety decision in an NRC SER, (2) made in response to an NRC Bulletin or Generic Letter, (3) made in response to a request for information under 10 CFR 50.54(f) or 10 CFR 2.204, or, (4) identified as a long term corrective action in response to a NRC Notice of Violation?  No. Continue with STEP 5.  Yes. Has the commitment been implemented? (see page 11 of the guidance if the
	commitment was made in response to a Notice of Violation.)  No. EXIT PROCESS*. Provide timely notification of revised commitment to NRC.  Yes. EXIT PROCESS*. Notify NRC of revised commitment in next annual/RFO interval summary report.
5.	Was original commitment made to minimize recurrence of an adverse condition (i.e., a long-term corrective action stated in a LER)?  No. Change commitment. No NRC notification required.  Yes. Is the revised commitment necessary to minimize recurrence of the adverse condition?  No. Briefly describe rationale**:
	Change commitment. No NRC notification required.  Yes. Notify NRC of revised commitment in next annual/RFO interval summary report.

<sup>\*</sup>EXIT PROCESS means the balance of this summary is not to be completed.

<sup>\*\*</sup> Attach additional sheets providing rationale, if necessary.