

~~**TREAT AS**~~
~~**SENSITIVE**~~
~~**INFORMATION**~~



TXU Power
Comanche Peak Steam
Electric Station
P. O. Box 1002 (E01)
Glen Rose, TX 76043
Tel: 254 897 5209
Fax: 254 897 6652
mike.blevins@txu.com

Mike Blevins
Senior Vice President &
Chief Nuclear Officer

Ref: 10CFR50.54(q)
10CFR50.4(b)(5)

CPSES-200501317
Log # TXX-05116

June 15, 2005

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
TRANSMITTAL OF COMANCHE PEAK STEAM ELECTRIC
STATION (CPSES) EMERGENCY PLAN, REVISION 32**

Gentlemen:

In accordance with 10CFR50.54(q), TXU Generation Company LP (TXU Power) hereby submits Revision 32 of the CPSES Emergency Plan. The changes comprising Revision 32 were evaluated and determined to not decrease the effectiveness of the existing plan. Changes in this revision are indicated by a Revision 32 change bar, and the Attachment to this letter provides a summary of all changes included in this revision. This revision was made effective at CPSES on May 17, 2005.

As an Enclosure to this letter, the following is transmitted as prescribed in 10 CFR 50.4(b)(5):

CPSES EMERGENCY PLAN - 1 Original (REVISION 32)

This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2.

AK43

A member of the STARS (Strategic Teaming and Resource Sharing) Alliance

Callaway • Comanche Peak • Diablo Canyon • Palo Verde • South Texas Project • Wolf Creek

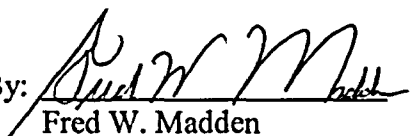
Should you have any questions, please contact Mr. Bob Kidwell at (254) 897-5310.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

Mike Blevins

By: 
Fred W. Madden
Director, Regulatory Affairs

RJK

Attachment (Summary of Changes for Revision 32 CPSES Emergency Plan)
Enclosure

- c - B. S. Mallett, Region IV (clo)
- M. C. Thadani, NRR (clo)
- Resident Inspectors, CPSES (clo)
- Ryan Lance, Senior Emergency Preparedness Inspector, Region IV
- Paul Elkmann, Emergency Preparedness Inspector, Region IV

CPSES Emergency Plan – Revision 32

Summary of Changes

Page(s)	Description of change	Justification
Title page	Updated to Revision 32	editorial
iv	Change from onsite News Center to offsite Joint Information Center (JIC)	Facility change is in response to a FEMA planning issue identified during the 2003 Graded Exercise. New JIC is >10 miles from the site versus onsite, and includes provisions for greater participation by offsite organizations.
ix	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
1-3	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
1-8	Change from onsite News Center to offsite Joint Information Center (JIC) Update from company name from TXU Energy to TXU Power	As previously discussed. Name change approved and implemented via Tech Spec Amendment 90.
1-9, 1-10, 1-11	Update from company name from TXU Energy to TXU Power	As previously discussed.
Fig 1.5, Fig 1.6	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
3-3	Update siren count to 72 Update from company name from TXU Energy to TXU Power	Alert and Notification System changes have been reviewed by FEMA with no potential negative impacts identified. As previously discussed.
4-1, 4-2	Update description of the Gaitronics System to reflect modification of one (1) channel as a dedicated Control Room (CR) paging channel.	This modification does not reduce the overall number of channels used by the system, but does change the use of one channel to become a dedicated CR paging channel. This mod was performed to reduce the background noise and distractions presented to CR operating staff.

Page(s)	Description of change	Justification
4-4	Removal of the emergency evacuation alarm tone from the CR overhead speakers.	This alarm tone was removed from these speakers since the CR is the only location that can sound this alarm and further feedback of the condition is not necessary. This change also reduces background noise and distractions presented to CR operating staff during an emergency condition.
4-5	Update from company name from TXU Energy to TXU Power	As previously discussed.
Table 4.1	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
	Update from company name from TXU Energy to TXU Power	As previously discussed.
5-1	Update from company name from TXU Energy to TXU Power	As previously discussed.
6-7	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
6-8	Update from company name from TXU Energy to TXU Power	As previously discussed.
11-1, 11-2, 11-3, 12-3, 14-1	Update from company name from TXU Energy to TXU Power	As previously discussed.
H-2	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
	Removes reference to LOA ORNL	ORNL no longer provides backup lab services under contract. CPSES and HL&P maintain an agreement to provide this service to each other under the Contingency Sampling Plan.
J-2	Update from company name from TXU Energy to TXU Power	As previously discussed.
K-2	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
P-2	Update from company name from TXU Energy to TXU Power	As previously discussed.

Page(s)	Description of change	Justification
Q-2, Q-3, Q-4	Update from company name from TXU Energy to TXU Power	As previously discussed.
	Change from onsite News Center to offsite Joint Information Center (JIC)	As previously discussed.
Q-5	Change definitions of: <ul style="list-style-type: none">- Site Evacuation- Squaw Creek Park	Updated these definitions to reflect the latest access restrictions implemented by the CPSES Security Plan.
EPL-1 thru EPL-6	Updated to reflect Revision 32	editorial

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN

(CPSES/EP)

REVISION 32, EFFECTIVE 05/17/05

CPSES/EP
TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>
1.0	Purpose
1.1	Concept of Operation
1.1.1	Preparedness
1.1.2	Response
1.1.2.1	CPSES Organization
1.1.2.2	CPSES Emergency Response Organization
1.1.3	Recovery
1.2	Emergency Response Support and Resources
1.2.1	Corporate Support
1.2.2	Local Services Support
1.2.3	Private Sector Support
1.2.4	State Agencies
1.2.5	Federal Agencies
2.0	Emergency Classification System
2.1	Emergency Classifications
2.1.1.a	Notification of Unusual Event
2.1.1.b	Alert
2.1.1.c	Site Area Emergency
2.1.1.d	General Emergency
2.2	Emergency Classification Initiating Conditions
3.0	Notification Methods and Procedures
3.1	Notifications
3.1.1	Initial Notifications
3.1.2	Notification of NRC
3.1.3	Followup Notifications
3.2	Public Warning
3.3	Methods of Providing Public Information Regarding Protective Action Measures

CPSES/EP

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>
4.0	Emergency Communications
4.1	System Description
4.1.1	Public Address System
4.1.2	Intracanal Telephone System
4.1.3	Intracanal Sound-Powered Telephone System
4.1.4	Intracanal Radio Transmitter-Receiver System
4.1.5	Public Telephone System
4.1.6	Direct Telephone Line to the System Dispatcher
4.1.7	Other Telephone Lines
4.1.8	Emergency Evacuation Alarm System
4.1.9	Direct Line to State and Local Emergency Operations Centers
4.2	Federal Telecommunications System
4.3	Facsimile Communications
4.4	Autodial Calling System
4.5	CPSES Microwave Communications System
4.6	Pager System
5.0	Public Education and Information
5.1	Public Information Releases During Emergency Conditions
5.2	Rumor Control

CPSES/EP

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>
6.0	Emergency Facilities and Equipment
6.1	Control Room
6.1.1	Function
6.1.2	Location
6.1.3	Staffing and Training
6.1.4	Habitability
6.1.5	Communications
6.2	Technical Support Center
6.2.1	Function
6.2.2	Location
6.2.3	Staffing and Training
6.2.4	Size
6.2.5	Structure
6.2.6	Habitability
6.2.7	Communications
6.2.8	Instrumentation, Data Systems Equipment, and Power Supplies
6.2.9	Records Availability and Management
6.3	Operations Support Center
6.3.1	Function
6.3.2	Location and Size
6.3.3	Staffing and Training
6.3.4	Habitability
6.3.5	Communications
6.4	Emergency Operations Facility
6.4.1	Function
6.4.2	Location

CPSES/EP

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	
6.4.3	Staffing and Training	
6.4.4	Size	
6.4.5	Structure	
6.4.6	Habitability	
6.4.7	Communications	
6.4.8	Instrumentation, Data System Equipment, and Power Supplies	
6.4.9	Records Availability and Management	
6.5	Joint Information Center	32
6.5.1	Function	
6.5.2	Location	
6.5.3	Staffing and Training	
6.5.4	Size	
6.5.5	Habitability	
6.5.6	Communications	
6.6	Emergency Response Facilities Radiological Habitability	
6.7	Laboratory Facilities in EOF-NOSF	
6.8	Other Radiological Laboratory Support	
6.9	Decontamination Facilities	
6.10	Onsite Emergency Aid Facilities	
6.11	Emergency Equipment and Supplies	
6.12	State and Local Emergency Operations Centers	
6.13	Assessment Systems and Equipment	
6.13.1	Safety Parameter Display System	
6.13.2	Emergency Response Facility Computer System	
6.13.3	Radiation Monitoring System	

CPSES/EP

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	
6.13.4	Health Physics Instrumentation	
6.13.5	Meteorological Measurements Program	
6.13.6	Seismic Instrumentation	
6.13.7	Hydrological Monitoring	
6.13.8	Process Monitor Instrumentation	
6.13.9	Fire Detection Instrumentation	
6.13.10	Environmental Radiological Monitoring Program	30
7.0	Accident Assessment	
7.1	Computer Assessment of Radiological Conditions	
7.2	Calculation of Offsite Doses	
7.3	Onsite and Offsite Radiological Conditions	
7.3.1	Onsite Radiological Assessment	
7.3.2	Offsite Radiological Assessment	
8.0	Protective Response	
8.1	Onsite Protective Actions	
8.1.1	Evacuation	
8.1.2	Accountability	
8.1.3	Monitoring of Evacuees	
8.1.4	Respiratory Protection	
8.1.5	Protective Clothing	
8.1.6	Radioprotective Drugs	
8.2	Offsite Protective Actions	
8.2.1	Emergency Planning Zones	

CPSES/EP
TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>
8.2.2	Evacuation Time Estimates
9.0	Radiological Exposure Control
9.1	Emergency Exposure Criteria
9.2	Contamination Control
9.3	Decontamination
9.4	Radioactive Waste
10.0	Medical and Public Health Support
10.1	Hospital and Medical Support
10.2	Onsite First Aid
10.3	Transportation of Injured to Offsite Facilities
11.0	Reentry and Recovery
11.1	CPSES Recovery Organization
11.1.1	CPSES Recovery Organization--Functional Responsibilities
11.2	Estimating Total Population Exposure
12.0	Exercises and Drills
12.1	Exercises
12.2	Drills
12.2.1	Communication Drills
12.2.2	Fire Drills
12.2.3	Emergency Medical Drills
12.2.4	Radiological Monitoring Drills
12.2.5	Health Physics Drills
12.3	Drill and Exercise Scenarios
12.4	Critique of Drills and Exercises
13.0	Radiological Emergency Response Training
14.0	Responsibility for Planning Effort

CPSES/EP

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>
15.0	Appendices
A.	CPSES Shift Crew Chart
B.	(Deleted)
C.	(Deleted)
D.	(Deleted)
E.	CPSES Complex and Owner Controlled Area
F.	CPSES 0-10 miles
	1. Demographic Information Map
	2. Area Map
G.	CPSES 10 - 50 miles
H.	List of Letters of Agreement and Supporting Emergency Plans
J.	Emergency Equipment and Supplies
K.	List of Emergency Plan Procedures
M.	CPSES Evacuation Time Estimates and Staffing Estimates
N.	Emergency Planning Zone (EPZ) Evacuation Time Estimates
P.	Cross Index to NUREG-0654
Q.	Definitions
R.	(Deleted)
S.	(Incorporated into CPSES Emergency Plan)

Note: The Letters I, L and O are not used as appendix designators.

CPSES/EP
LIST OF TABLES

<u>Section</u>	<u>Title</u>
1.1	Staffing Requirements for Emergencies
1.2	Predetermined Response Actions
2.1	Initiating Conditions for Emergency Classifications
4.1	Communications Interfaces
4.2	Emergency Response Communication –Responsibilities and Interfaces

CPSES/EP

LIST OF FIGURES

<u>Section</u>	<u>Title</u>	
1.1	Functional Interfaces of the Integrated Emergency Response Organization	
1.2	Emergency Organization (Shift Manager as Emergency Coordinator)	
1.3	Emergency Organization (Technical Support Center Manager as Emergency Coordinator)	
1.4	Emergency Organization Operations Support Center	
1.5	Emergency Organization (Emergency Operations Facility Manager as Emergency Coordinator)	
1.6	Emergency Organization Joint Information Center	32
6.1	Emergency Operations Decontamination Facilities in the Nuclear Operations Support Facility	
11.1	CPSES Recovery Organization.	

CPSES/EP

1.0	<u>PURPOSE</u>	25
	The objective of the Comanche Peak Steam Electric Station (CPSES) Emergency Preparedness Program is to protect the health and safety of the general public, persons visiting or temporarily assigned to the station, and station employees in the event of an emergency at the station.	26
	To meet this objective, the CPSES Emergency Plan creates a high order of preparedness and ensures an orderly and timely decision-making process in times of stress. Emphasis is placed on maintaining emergency preparedness through training, drills, and exercises. It further assures availability of equipment, supplies, and essential services. This plan also provides for coordination of onsite and offsite emergency response.	25
	Specific details for execution of this plan are incorporated by implementing procedures referred to as Emergency Plan Procedures. While this document outlines overall aspects of emergency preparedness, Emergency Plan Procedures contain specific individual responsibilities and establish instructions for accomplishing specific tasks. A list of Emergency Plan Procedures is maintained in Section 15.0, Appendix K. The CPSES Emergency Plan and Emergency Plan Procedures are also complemented by many general and/or discipline specific provisions that are related to emergency preparedness but which are incorporated into other station procedures (e.g. Operations, Security, Chemistry, Radiation Protection).	26 25 28
	The CPSES Emergency Plan provides direction and coordination of the CPSES Emergency Response Organization (ERO). Emergency Plan Procedures detail various job functions in support of the Emergency Plan and assure a smooth transition from normal mode to emergency mode of operation. Assignment of CPSES Emergency Response Organization personnel to job functions is discussed in this plan. Additional assistance may be provided to the onsite group by offsite company personnel, local, state, and federal agencies, and contract personnel as required.	26 25 26 25
	The normal organization of station personnel is discussed in Section 1.1.2.1 which describes and assigns authority and responsibility for declaring an emergency. Upon declaration of an emergency, individuals in the normal operating organization assume Emergency Response Organization responsibilities.	26 25
	Criteria are established to promptly determine the emergency classification. Emergency classifications for CPSES are Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency. Degree of involvement of onsite, local, state, and federal personnel depends on the emergency classification. At the least severe classification, Notification of Unusual Event, the emergency situation may have no potential for escalation to a more severe classification and there may be no effect on station operating status. Response to this situation should involve only onsite personnel and would not necessitate mobilization of the offsite emergency organization. If an emergency event results in a higher classification and offsite consequences require protective action, then local, state, and federal agencies along with additional company personnel would become involved to assist in mitigation of the emergency. The interrelationships between CPSES, local, state, federal, and any private agencies are described throughout this plan section and are shown in Figure 1.1.	26 25 26 25 26

CPSES/EP

This plan does not address operation of station equipment as this is covered in operating, abnormal operating and emergency operating procedures. This plan and its implementing procedures are designed to interface with, but not interfere with, objectives of the Security Plan, the Fire Protection Report, and the Spill Prevention Control and Countermeasure Plan. The CPSES Emergency Plan is designed to complement the Texas Emergency Management Plan and to interface with Hood and Somervell County Emergency Operations Plans.

The CPSES Emergency Plan is designed to provide guidance when confronting an emergency. Emergency Plan Procedures provide guidance and information to ensure the purpose of the Emergency Plan is achieved. The Emergency Plan reflects management's recognition of a need to cope with a broad spectrum of consequences and prescribes actions necessary for onsite personnel to activate support groups and establish communications to protect the public and CPSES.

1.1 CONCEPT OF OPERATION

The Emergency Plan includes provisions for actions to be taken during three phases of emergency management:

- Preparedness
- Response
- Recovery

1.1.1 PREPAREDNESS

Actions and activities associated with this phase are described in various sections of this Plan, and include the development and maintenance of the following:

- Emergency Plan with supporting appendices, implementing procedures, facilities, and equipment.
- Training, drill, and exercise programs.
- Review of the Emergency Preparedness Program.

1.1.2 RESPONSE

Actions and activities required to place the station in a safe stable condition, to protect the health and safety of the public, and to initiate requests for assistance.

The CPSES response to an emergency event begins with the personnel resources assigned on-shift. On-shift personnel are augmented as determined by the Emergency Coordinator and in accordance with this plan and the emergency classification. Prior to declaring an Alert, the Shift Manager (Emergency Coordinator) has the authority to call in any portion of the augmentation staff specified in Table 1.1 as may be required for emergency response. The organized response of the on-shift and any augmented personnel resources identified in this plan represents the CPSES Emergency Response Organization. Staffing of the entire CPSES Emergency Response Organization shall be initiated in the event of an Alert or higher classification. On-shift staffing and staff augmentation assignments for emergencies are identified in Table 1.1. Predetermined response actions, based on the emergency classification declared, are identified in Table 1.2. The total emergency response organization includes support by local, state, federal, and private sector organizations. Figure 1.1 shows the interfaces between the various organizations.

CPSES/EP

A brief discussion of the purpose of each emergency classification and predetermined response actions is provided below.

26

Notification of Unusual Event (NOUE)

The purpose of this classification is to:

- assure preliminary emergency response actions have been implemented,
- bring operating staff to a state of readiness, and
- provide for systematic handling of unusual events, information and decision making.

At the NOUE, key CPSES personnel as well as State and local officials are notified.

Alert

The purpose of this classification is to:

- assure emergency response personnel are readily available to respond if the situation becomes more serious or to perform confirmatory radiological monitoring, if required, and
- provide offsite authorities with current status information.

In addition to actions taken for an NOUE, at the Alert callout of the CPSES ERO is initiated and the Technical Support Center (TSC) and Operations Support Center (OSC) are activated and the Emergency Operations Facility (EOF) and Joint Information Center (JIC) are staffed to augment the operating staff.

32
26

Site Area Emergency

The purpose of this classification is to:

- assure emergency response facilities are manned,
- assure radiological monitoring teams are deployed,
- assure personnel required for evacuation of near-site areas are at their duty stations if the situation becomes more serious,
- provide for consultation with offsite authorities, and
- provide periodic updates to the public through offsite authorities.

In addition to actions taken for an NOUE and/or Alert, at the Site Area Emergency:

- all CPSES Emergency Response Facilities are activated (OSC, TSC, EOF, and JIC),
- non-essential personnel are evacuated from the CPSES site unless otherwise directed by the Emergency Coordinator,
- the State and county EOC's are staffed and activated,
- the County Judge(s) will consider evacuation of schools and special facilities as well as make a decision on any protective action recommendations, and
- the County Judge(s) request the Relocation Centers to be activated.

32
26

General Emergency

The purpose of this classification is to:

- initiate predetermined protective actions for the public,
- provide continuous assessment of plant information and radiological monitoring measurements taken by licensee and offsite organizations,
- initiate additional measures as indicated by actual or potential radiological releases,
- provide for consultation with offsite authorities, and
- provide periodic updates to the public through offsite authorities.

In addition to actions taken at the NOUE, Alert, and/or Site Area Emergency, at the General Emergency the County Judge(s) decide which protective action recommendations to implement.

1.1.2.1 CPSES Organization

The initial response starts with the normal Operations shift. The operating organization, along with minimum on-shift complement is discussed in the Final Safety Analysis Report, section 13.1.

The Operations shift is responsible for the safe operation of the plant and provides for 24-hour per day emergency response. The Operations shift responds to all abnormal and emergency events and takes action as necessary to mitigate the consequences of an event. Minimum response actions, based upon the emergency classification declared, are identified in Table 1.2. Details regarding these actions are specified in the Emergency Plan Procedures.

The following principal responsibilities are assigned to the Operations shift until relieved by members of the CPSES Emergency Response Organization (ERO).

Shift Manager

- At the onset of an event, assess, classify, and declare the emergency.
- Assume the duties and responsibilities of the Emergency Coordinator.
- Implement response actions based upon the emergency classification declared.

Shift Technical Advisor

- Provide engineering expertise and advice regarding plant transient analysis, accident mitigation, core/thermal hydraulics, and other matters related to operational safety.
- Perform dose assessment.

Control Room Communicators

- Notify the CPSES ERO of the event.
- Notify state and local offsite agencies by initial and follow-up notifications.
- Notify the Nuclear Regulatory Commission (NRC) of the event.
- Notify other selected personnel.

Radiation Protection Technicians

- Perform in-plant and onsite radiological surveys.
- Provide radiological control coverage for emergency repair, search and rescue, first aid, fire fighting and other activities.
- Provide radiological support to emergency response facilities.

26

25

26

25

26

CPSES/EP

<u>Chemistry Technicians</u>	26
<ul style="list-style-type: none">• Perform in-plant chemistry sampling and analysis.• Function as part of the CPSES First Aid Team.	31
<u>Security Shift Supervisor</u>	25
<ul style="list-style-type: none">• Control access to site property.• Assist with site evacuation.• Perform personnel accountability.	
<u>Emergency Teams</u>	
<ul style="list-style-type: none">• Emergency Repair & Damage Control Perform maintenance activities associated with mechanical equipment, electrical equipment, and instrumentation and control systems.• Fire Brigade Perform fire fighting activities in accordance with station procedures. Perform rescue activities.• First Aid Provide first aid services to injured personnel. Provide transportation to local hospitals.	31 25
1.1.2.2 <u>CPSES Emergency Response Organization (ERO)</u>	
<p>The Operations shift is staffed to be self-reliant for a period of time to allow for the notification of other personnel and the staffing and activation of emergency response facilities per Section 6.0, "Facilities and Equipment."</p> <p>In addition to Operations shift personnel, other personnel in the CPSES ERO assume roles in supporting the overall emergency response. The CPSES ERO is outlined in Figures 1.2 through 1.6. Emergency Response Organization positions and principal responsibilities not discussed in Section 1.1.2.1, are discussed below.</p>	26
<u>Emergency Coordinator</u>	25
<p>Has responsibility and authority to immediately and unilaterally initiate all provisions of the CPSES Emergency Plan, and for evaluation, coordination and control of all onsite activities related to the emergency response until the event is closed out or the CPSES Recovery Organization is formed.</p> <p>a. Additional principal responsibilities include:</p> <ul style="list-style-type: none">• Assessment, classification, and declaration of an emergency.• Ensuring notification of officials in Hood and Somervell counties, Texas Department of Public Safety, the Nuclear Regulatory Commission, and other organizations as needed.• Approving shift schedules that support long-term emergency response to permit continuous operation.• Authorizing onsite protective actions.• Requesting and providing support to federal, state and local personnel, as appropriate.• Coordinating offsite CPSES emergency response activities with activities conducted onsite.	

CPSES/EP

- b. The Emergency Coordinator shall NOT delegate the decision-making authority for:
- recommending use of Potassium Iodide
 - authorizing reentry into evacuated onsite areas
 - authorizing personnel exposures in excess of 10CFR20 limits
 - making protective action recommendations to offsite authorities
 - approval of notification messages.
- 25

- c. The duties and responsibilities of the Emergency Coordinator are transferred after the successor has been briefed on current plant status and status of offsite and onsite emergency response activities and as described below:

Upon classifying an event, the Shift Manager assumes the role of Emergency Coordinator. The Technical Support Center (TSC) Manager relieves the Shift Manager of Emergency Coordinator duties at an Alert or higher emergency classification. The TSC Manager may relieve the Shift Manager of Emergency Coordinator duties at an Notification of Unusual Event. After the Emergency Operations Facility (EOF) has been activated, the duties of Emergency Coordinator may be transferred to the EOF Manager; however, the responsibility to assess, classify, and declare the emergency shall remain with the TSC Manager unless the TSC and EOF Manager agree to transfer this function.

26

CR Operations (Ops) Advisor

The CR Ops Advisor serves as the contact point between the operating crew and the TSC staff.

Technical Support Center Manager

The TSC Manager is responsible for activation and control of emergency response activities conducted in the TSC. The TSC Manager relieves Control Room personnel of administrative functions and decisions and maintains direction and control of onsite emergency response activities conducted within the Protected Area which are required to place the plant in a safe, stable condition.

25

TSC Communications Coordinator

The TSC Communications Coordinator is responsible for coordinating communications activities in the TSC. Prior to EOF activation the position is also responsible for administrative and logistical support.

TSC Onsite Radiological Assessment Coordinator

The TSC Onsite Radiological Assessment Coordinator provides backup dose assessment capabilities and is responsible for directing the onsite radiological assessment activities and ensuring the radiological safety of personnel onsite.

26

CPSES/EP

TSC Operations (OPs) Coordinator

26

The TSC OPs Coordinator serves as the Operations representative to the TSC staff and as the contact point between the TSC and the operating crew.

TSC Engineering Team Coordinator

25

The TSC Engineering Team Coordinator is responsible for directing and coordinating activities of the TSC Engineering Team to assess plant status and severity of emergency conditions.

25

TSC Engineering Team

The TSC Engineering Team is composed of at least four individuals with the experience and competence to provide technical support to the Control Room staff in the following areas:

28

- core reactivity monitoring and damage assessment;
- damage assessment (Mechanical/Electrical/I&C) and corrective action development;
- operations data and procedure interface; and
- engineering data analysis, including core thermal hydraulics.

26

With the location of the TSC being in close proximity to the Control Room (less than one minute transit time), contact is made with the Control Room staff for assistance and if necessary or requested an engineer(s) can promptly relocate to the Control Room.

28

Operations Support Center Manager

25

The OSC Manager is responsible for activation and control of emergency response activities conducted in the OSC. The OSC Manager is also responsible for dispatching and coordinating personnel to assist in emergency repair and damage control activities, performing radiological surveys, personnel rescue operations, establishing controlled areas, and implementing recovery actions.

OSC Radiation Protection Coordinator

30

The OSC Radiation Protection Coordinator directs the activities of the RP Technicians and is responsible for providing radiological protective measures for teams dispatched from the OSC.

OSC Chemistry Coordinator

The OSC Chemistry Coordinator directs the activities of the Chemistry Technicians and is responsible for coordinating requests for chemical analysis and for coordinating medical response and spill control teams from the OSC.

31

OSC Emergency Response and Damage Control (ERDC) Coordinator

30

The OSC ERDC Coordinator directs the activities of the Maintenance personnel, and is responsible for coordinating emergency repair and damage control teams dispatched from the OSC.

CPSES/EP

<u>Company Spokesperson</u>	26
The Company Spokesperson is responsible for coordinating with the Emergency Coordinator and approving public information releases issued by TXU Power from the JIC.	30 32
<u>Information Coordinator</u>	26
The Information Coordinator is responsible for gathering and communicating current technical event related information from the Emergency Coordinator to the JIC.	28 32
JIC Communicator is responsible for receiving the information from the Information Coordinator and forwarding that information to the Company Spokesperson and/or JIC Director.	
<u>Information Liaison</u>	26
The Information Liaison informs corporate communications, government sources, and media news services of event developments and obtains emergency-related information from outside sources.	
	28
<u>Joint Information Center Director</u>	32
The JIC Director schedules, coordinates and hosts press briefings and approves access to the JIC.	
<u>Press Release Writer</u>	
The Press Release Writer prepares press releases from approved information for dissemination to the media.	
<u>Rumor Control Coordinator</u>	26
The Rumor Control Coordinator reviews received rumors and media broadcasts for consistency with approved information and reports findings to the Company Spokesperson.	
<u>JIC Support Staff (Aides)</u>	32
The JIC Support Staff:	
<ul style="list-style-type: none">• host media representatives,• set up and monitor audio visual equipment,• record news conferences,• monitor media broadcasts for event related information, and• answer telephone requests for information from the public and the media.	26

CPSES/EP

EOF Manager

25

The EOF Manager is responsible for activation and control of emergency response activities conducted in the EOF.

EOF Communications Coordinator

The EOF Communications Coordinator is responsible for coordinating communications activities in the EOF.

EOF Radiation Protection Coordinator

The EOF Radiation Protection Coordinator (RPC) and staff (see Figure 1.5) are responsible for coordinating TXU Power offsite radiological monitoring efforts. The EOF RPC is also responsible for coordinating TXU Power offsite radiological assessment activities with those of local, state and federal agencies.

32

- a. The EOF Offsite Radiological Assessment Coordinator (OFFRAC), who reports to the EOF RPC, is responsible for coordinating the efforts of the offsite radiological assessment team in performing activities such as:
 - Nuclear Operations Support Facility (NOSF) habitability, and
 - dose projections and assessment.
- b. The Offsite Monitoring Team Director, who reports to the EOF RPC, is responsible for coordinating the efforts of the offsite radiological monitoring team(s) in performing activities such as:
 - locating and tracking the offsite plume, and
 - offsite monitoring team direction and control.

26

EOF Logistical Support Coordinator

25

The EOF Logistical Support Coordinator and his staff (see Figure 1.5) coordinate requests from the ERO for administrative and logistical assistance. These requests include such items as meals, parts and supplies, transportation, and manpower issues (such as shift relief schedules).

26

EOF/TSC Liaison

The EOF/TSC Liaison provides technical support (which includes classification input if required) to the EOF Management team and serves as a liaison between the EOF personnel and the TSC Engineering team.

EOF Security Coordinator

25

The EOF Security Coordinator is responsible for coordinating onsite security force activities.

Emergency Planning (EP) Advisors

26

EP Advisors assist the ERO with facility activation and provide expertise and information to ERO personnel concerning both utility and offsite supporting emergency facilities, communication capabilities, personnel and equipment resources, and procedural requirements.

CPSES/EP

State and Local EOC Advisors

26

Station personnel assigned to augment and advise state/county emergency organizations. Duties of the Local EOC Advisors are described in Section 1.2.2, "Local Services Support".

Emergency Communicators

Designated personnel, as depicted on table 4.2, are assigned the function of providing an interface between the CPSES emergency facilities, accident assessment teams, and State/Local/Federal authorities. The communicators use dedicated equipment, as depicted on table 4.1, to perform these functions.

Administrative and Clerical Support personnel

Various administrative and clerical support personnel are used in the emergency response facilities for duties such as maintaining logs, answering telephones, transmitting faxes, and distributing information.

Board Recorders

Various personnel are assigned to post and update status boards within the emergency response facilities. These personnel use dedicated boards and communications equipment to facilitate the sharing of information between facilities.

1.1.3 RECOVERY

25

Actions taken to return the plant to an operational status or maintain long-term safe shutdown condition after the emergency response actions have been completed. If a recovery effort is deemed necessary, the CPSES Recovery Organization is established in accordance with Section 11.0 "Recovery and Reentry."

1.2 EMERGENCY RESPONSE SUPPORT AND RESOURCES

1.2.1 Corporate Support

TXU Power maintains sufficient management and personnel resources at the CPSES site to effectively staff (24 hours) the CPSES Emergency Response Organization and its intended emergency mitigation functions. This arrangement preempts the need for a separate organization of offsite corporate personnel to be identified for, and incorporated in, the CPSES Emergency Response Organization; however, in the event of an emergency requiring assistance from offsite organizations, TXU Power management is fully committed to providing other resources to assist the CPSES Emergency Response Organization. Examples of other corporate capabilities existing within TXU Power include public information services, materials procurement services, contract manpower and construction services, legal and insurance services, and additional technical support.

32

1.2.2 Local Services Support

The local response organizations involved with emergencies at CPSES are the Hood County and Somervell County Emergency Organization. Each county has an emergency operations plan which describes the counties emergency response. The County Judge is in charge of the emergency organizations and has the legal authority for protective action decision making within their respective county. To assist the

26

28

CPSES/EP

county emergency organizations, TXU Power sends a representative who is familiar with station operations and the CPSES Emergency Plan to each county Emergency Operations Center. The representative functions as an advisor and may act as liaison between the county officials and the CPSES Emergency Response Organization; however, these representatives are not company spokespersons. 32
25

Support from local organizations may be obtained through direct notification to the individual organization. Letters of Agreement from each organization to provide their respective emergency assistance to CPSES are maintained onsite. A list of Letters of Agreement is provided in Section 15.0, Appendix H, which identifies the local services support organizations. 28

1.2.3 Private Sector Support 25

Support from private sector organizations may be obtained through direct notification to the individual organization. The following organizations provide services, if requested: 28

- Westinghouse Corporation 25

Westinghouse Corporation, the designer for the Nuclear Steam Supply System (NSSS), has an emergency response group which provides for emergency engineering assistance to facilities having a NSSS designed by Westinghouse. This assistance is available on a 24-hour/day, 7-day/week basis. Details of the response is contained in the Westinghouse Emergency Response Plan.

- Institute of Nuclear Power Operations (INPO)

INPO is an industry technical association whose Emergency Preparedness Division acts as a clearinghouse for maintaining a roster of individuals and skills available to each utility for augmenting the onsite ERO. INPO also serves as a clearinghouse for maintaining an inventory listing of material, equipment, and services which may be used to supplement onsite resources. Details of the response is contained in a letter of agreement.

- Houston Lighting and Power

The South Texas Project provides a backup service for analyzing Post Accident Samples. A Letter of Agreement outlines the analyzing capabilities of the South Texas Project Laboratory.

- American Nuclear Insurers (ANI)

TXU Power maintains a policy with ANI. ANI has agreed to assume responsibility for promptly assisting members of the public who may be adversely affected by an event at CPSES. This insurance policy alleviates the immediate financial burden that may be incurred by members of the public due to evacuation and relocation associated with an incident. ANI will have their representatives on the scene, prepared to commence the distribution of emergency funding at the earliest possible time, on a 24-hour a day basis. 32
25

CPSES/EP

1.2.4 State Agencies

25

The State of Texas has developed a Radiological Emergency Management Plan as a part of the State of Texas Emergency Management Plan. The fundamental legislation providing the basis for emergency response by civil authorities is the Texas Disaster Act of 1975, as amended. This act creates a Division of Emergency Management. The Division of Emergency Management is part of the Governor's office and is placed under the Director of the Texas Department of Public Safety by an Executive Order of the Governor. The duties and responsibilities of the principle and support agencies of the State of Texas are summarized below. The Commissioners of the Texas Department of Agriculture and the Texas Department of Health are responsible for implementing protective actions within the Ingestion Exposure EPZ in accordance with the Texas Emergency Management Plan. A detailed discussion of the state's response is contained in the Texas Emergency Management Plan and supporting Letters of Agreement. See Section 15.0, Appendix H for a list of Letters of Agreement.

26

- Division of Emergency Management

25

The Division of Emergency Management (DEM) is the agency responsible for coordinating overall response to emergency situations in the State of Texas. The Director, DEM, assumes overall direction and control of the state's response to an emergency condition at CPSES.

28

25

- Texas Department of Public Safety

The Texas Department of Public Safety (DPS) serves as the primary communication contact and coordinates emergency communications between CPSES and the State of Texas, Hood and Somervell Counties. The DPS coordinates with the local law enforcement officials and assists in maintaining traffic control, protecting life and property, establishing road-blocks, and alerting and warning persons in the affected area. The Highway Patrol Captain in District 6A Waco, Texas serves as Chairman of the Disaster District Committee. Requests for assistance from the local county EOC's are forwarded to District 6A. Requests that exceed the District's capability are forwarded to the state EOC in Austin. Response time for DPS personnel from the Disaster District Office in Waco to the station is approximately 2 hours.

- Texas Department of Health

The Texas Department of Health (TDH), Bureau of Radiation Control (BRC) is the responsible agency for providing technical assistance and advice to local governments during a radiological emergency at CPSES. Once notified of a Site Area or General Emergency by DEM, the BRC will establish a communication link from their Austin office to the station. The BRC dispatches response teams to the station in accordance with provisions of the Texas Radiological Emergency Management Plan. The BRC response is directed by the Bureau Chief. The response team is capable of providing environmental sampling and radiological monitoring, including a mobile radiological laboratory. This laboratory serves to analyze low-level radiological environmental samples. CPSES provides telephone and electrical hook-ups for use by the laboratory. It is expected that BRC personnel and the laboratory should arrive at

28

25

26

25

pre-determined locations within approximately four hours of notification. Space and telephone lines have been provided in the EOF for the response team. The BRC also provides assessment of offsite hazards and protective action recommendations.

25

1.2.5 Federal Agencies

The CPSES Emergency Coordinator is authorized to request federal assistance on behalf of the station under provisions of the Federal Radiological Emergency Response Plan. The CPSES Emergency Coordinator requests federal assistance by contacting the NRC. The Federal Emergency Management Agency (FEMA) is also a federal agency responding to CPSES.

To support the federal emergency response efforts, the following facilities are available:

Airports: Granbury, Cleburne, Stephenville, Meacham in Fort Worth, Love Field in Dallas, and Dallas-Fort Worth International

Motels: Granbury, Cleburne, Stephenville, Dallas, and Fort Worth

CPSES: Working space within the CPSES Emergency Response Facilities (ERFs) has been allocated for co-location of NRC personnel. Phones are available for NRC personnel within the ERFs.

- Nuclear Regulatory Commission

Specific responsibilities assigned to the NRC include:

Notification of FEMA whenever a radiological event occurs or when there is a high potential for such an event.

Monitoring operational data and assuring that adequate information and recommendations are being provided to offsite agencies.

As a back-up to CPSES, providing a technical assessment of onsite radiological and plant conditions to FEMA and other federal agencies, and keeping state and local offsite agencies apprised of any operational discussions that may affect offsite protective actions.

In coordination with CPSES and state and local offsite agencies, disseminate onsite data to FEMA and federal agencies, the news media, and the general public.

Methods of notifying the NRC are discussed in Section 3.0, "Notification Methods and Procedures." The NRC may be expected onsite within 4 hours of receiving notification of the event.

28

- Federal Emergency Management Agency

FEMA is responsible for coordinating all offsite federal agency responses. Specific responsibilities assigned to FEMA include:

Coordination of federal support to state and local officials.

Dissemination of data on offsite support actions to the federal agencies.

FEMA may send personnel to the EOF to coordinate activities with CPSES, NRC, and the state.

TABLE 1.1
STAFFING REQUIREMENTS FOR EMERGENCIES
PAGE 1 OF 2

FUNCTIONAL AREA	TASK	ONSHIFT ^(c)	ADDITIONS WITHIN MINUTES OF ALERT		ADDITIONS AT SAE OR GE	
			40	70		
Station Operations	Assessment of Operational Aspects	Shift Manager (SRO) Unit Supervisor (SRO) Reactor Operators (RO) (2) Plant Equipment Operators (4)		Plant Equipment Operator		28
Emergency Direction and Control ^(b)	Direction and control of onsite emergency activities as Emergency Coordinator.	Shift Manager (SRO) ^(a)		TSC Manager	EOF Manager	27
Communications	Notify station, local, state, and federal personnel and maintain communications.	Communicator Communicator ^(a)		TSC Communications Coordinator TSC ENS Communicator	EOF Communications Coordinator	28
Security	Site access control and personnel accountability	Security Shift Supervisor Security Officers (Per Security Plan)	Local Support		EOF Security Coordinator	26
Public Information	Approve release of public information	Shift Manager ^(a)		TSC Manager ^(a)	Company Spokesperson	28
Logistics	Obtain/Expedite needed resources for the ERO.	Shift Manager ^(a)		TSC Communications Coordinator ^(a)	EOF Logistical Support Coordinator	
Station System Engineering	Coordination/Control Technical Support	 Shift Technical Advisor		TSC Engineering Team Coordinator TSC Eng Team (4)		

TABLE 1.1
STAFFING REQUIREMENTS FOR EMERGENCIES
PAGE 2 OF 2

FUNCTIONAL AREA	TASK	ONSHIFT ^(c)	ADDITIONS WITHIN MINUTES OF ALERT		ADDITIONS AT SAE OR GE
			40	70	
Radiological Assessment	In-plant Survey	R.P. Technician		R.P. Technician (2)	
	Chem/ Radiochemistry	Chemistry Technician		Chemistry Technician	
	Onsite Surveys	R.P. Technician		R.P. Technician	
	Offsite Surveys		R.P. Technicians (2)	Vehicle Drivers (2)	
	Dose Assessment	Shift Technical Advisor ^(a)	TSC OnRAC	EOF Dose Assessor	
	Protective Actions	R.P. Technicians (2) ^(a)	R.P. Technicians (2)	R.P. Technicians (2)	
	Coordination/Control	Shift Manager ^(a)	TSC OnRAC ^(a)		EOF R.P. Coordinator
System Corrective Action	Emergency Repair and Damage Control (ERDC)	Plant Equipment Operator ^(a) Mechanic Electrician I&C Technician		OSC Manager Mechanic Electrician I&C Technician	
Fire	Fire Fighting and Rescue	Fire Brigade (5) ^(a)	Local Support		
Medical	First Aid	First Aid Team Member ^(a) Chemistry Technician	Local Support		
TOTAL		18	5	22	6

(a) May be provided by onshift or augmentation personnel assigned other functions.

(b) Shift Manager serves in this capacity until relieved by a designated individual (Section 1.1.2.2).

(c) The minimum onshift crew composition may be one (1) less than the minimum specified for any position during normal operations for a period of time not to exceed two (2) hours in order to accommodate unexpected absence, provided immediate action is taken to fill the required position. This exception does not permit any crew composition to be unmanned upon shift turnover due to an oncoming crew member being late or absent. This exception is not applicable during declared emergencies.

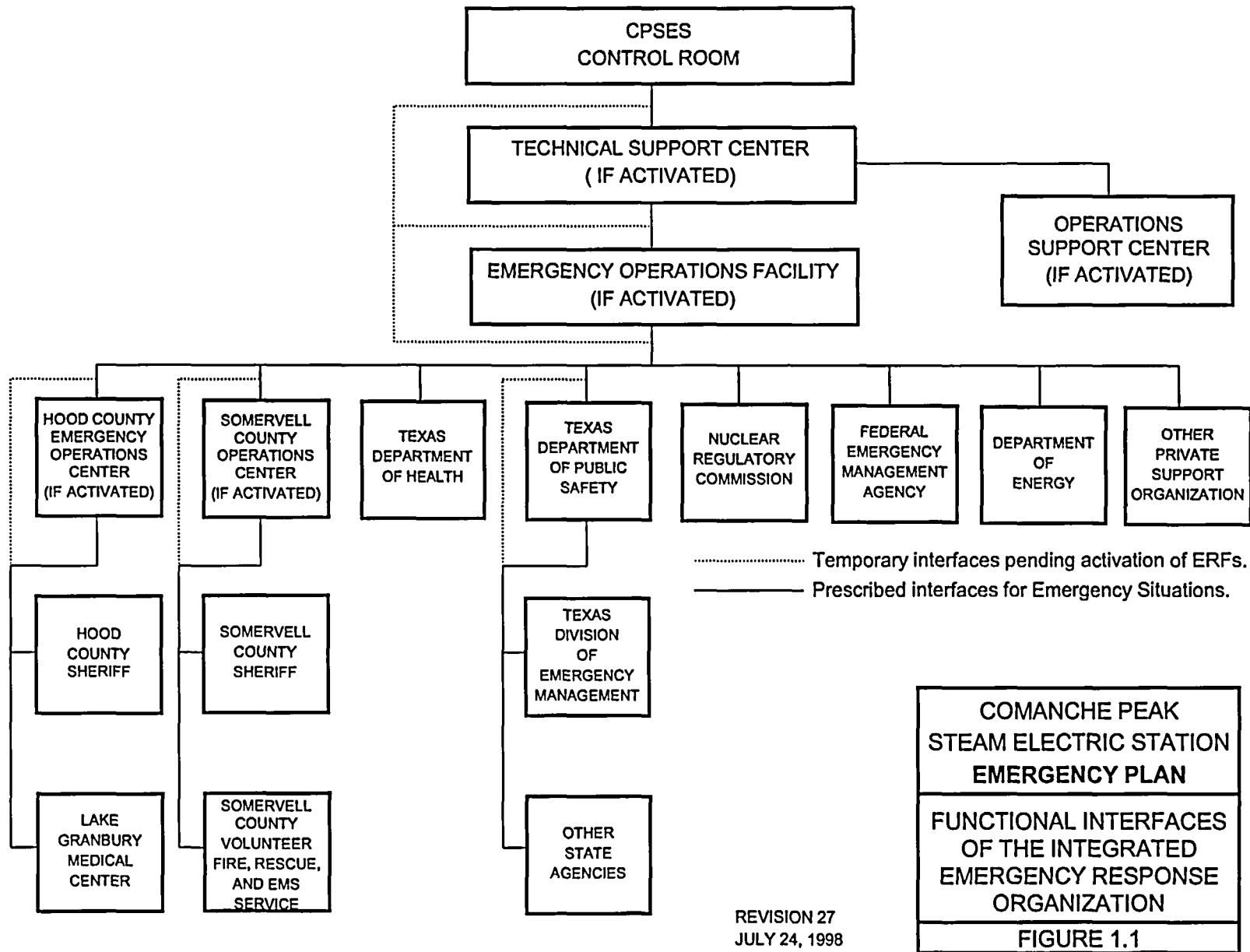
TABLE 1.2
PREDETERMINED RESPONSE ACTIONS
PAGE 1 OF 1

PREDETERMINED RESPONSE ACTIONS	NOUE	ALERT	SAE	GE
Notify state and local authorities within 15 minutes of declaring the event.	X	X	X	X
Notify the Nuclear Regulatory Commission (NRC) immediately after notification of the state and local authorities but not later than one (1) hour after declaring the event.	X	X	X	X
Staff and activate the Emergency Response Facilities: Technical Support Center (TSC) Operations Support Center (OSC) Emergency Operations Facility (EOF)		X ₁	X	X
Activate the Emergency Response Data System (ERDS) as soon as possible but not later than one (1) hour after declaring the event.		X	X	X
Assess the event and respond accordingly.	X	X	X	X
Dispatch Onsite Survey Teams.		X	X	X
Dispatch Offsite Monitoring Teams.			X	X
Provide periodic plant status updates to offsite authorities.	X	X	X	X
Provide periodic assessments of meteorological conditions to offsite authorities.		X	X	X
Provide periodic media briefings.			X	X
Provide senior onsite technical and management staff available for consultation with NRC and state on periodic basis.			X	X
Provide release rate and dose projection information.		X	X	X
Recommend protective actions to offsite officials.				X
Escalate to more severe class, if appropriate.	X	X	X	
Closeout the event with verbal summary to offsite authorities followed by written summary.	X ₂	X ₂	X ₂	X ₂

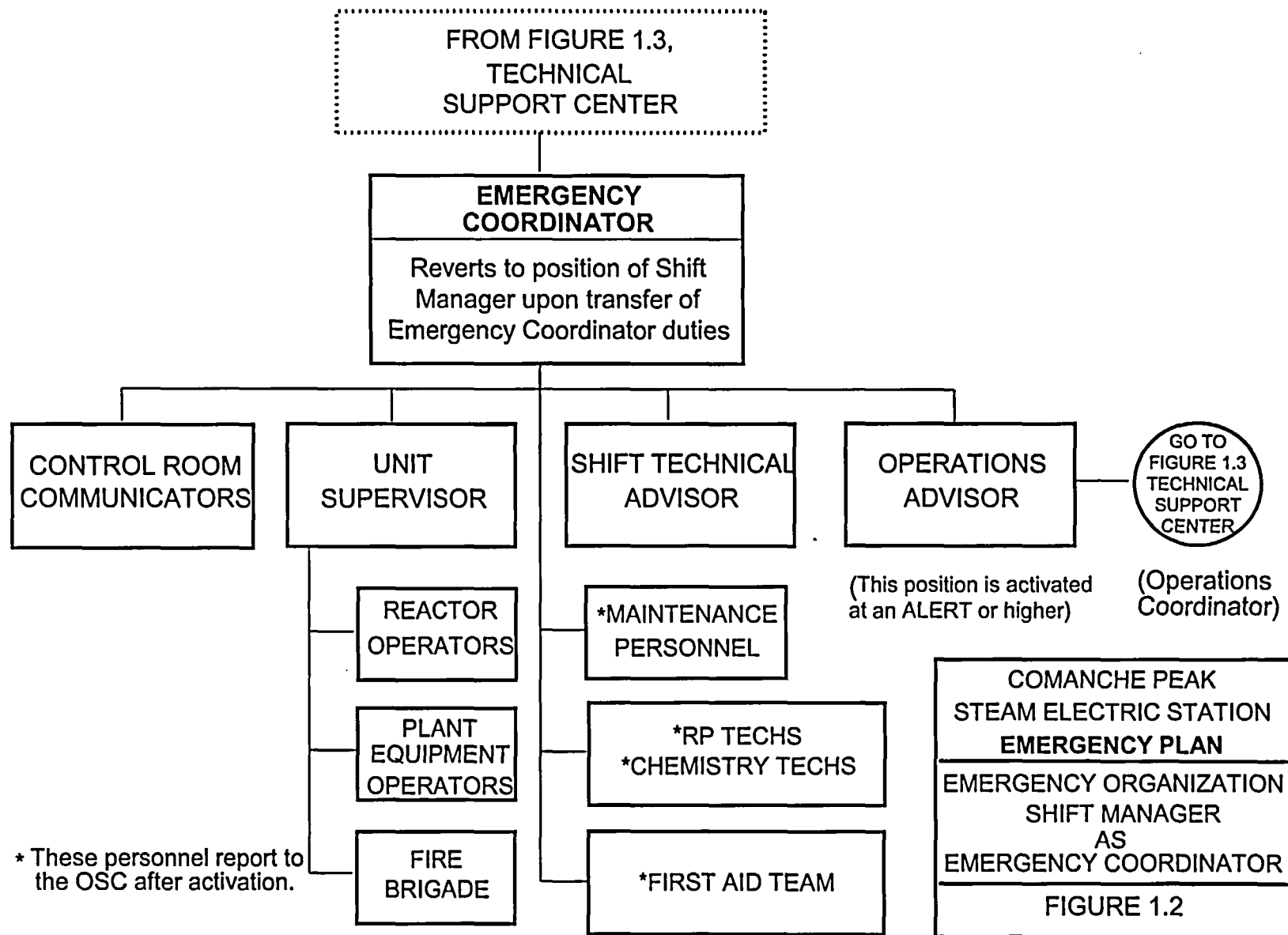
- 1 EOF activated at the SAE.
- 2 Notification Message Form used to closeout the emergency may be used to satisfy the requirements of verbal notification and written summary to offsite agencies.

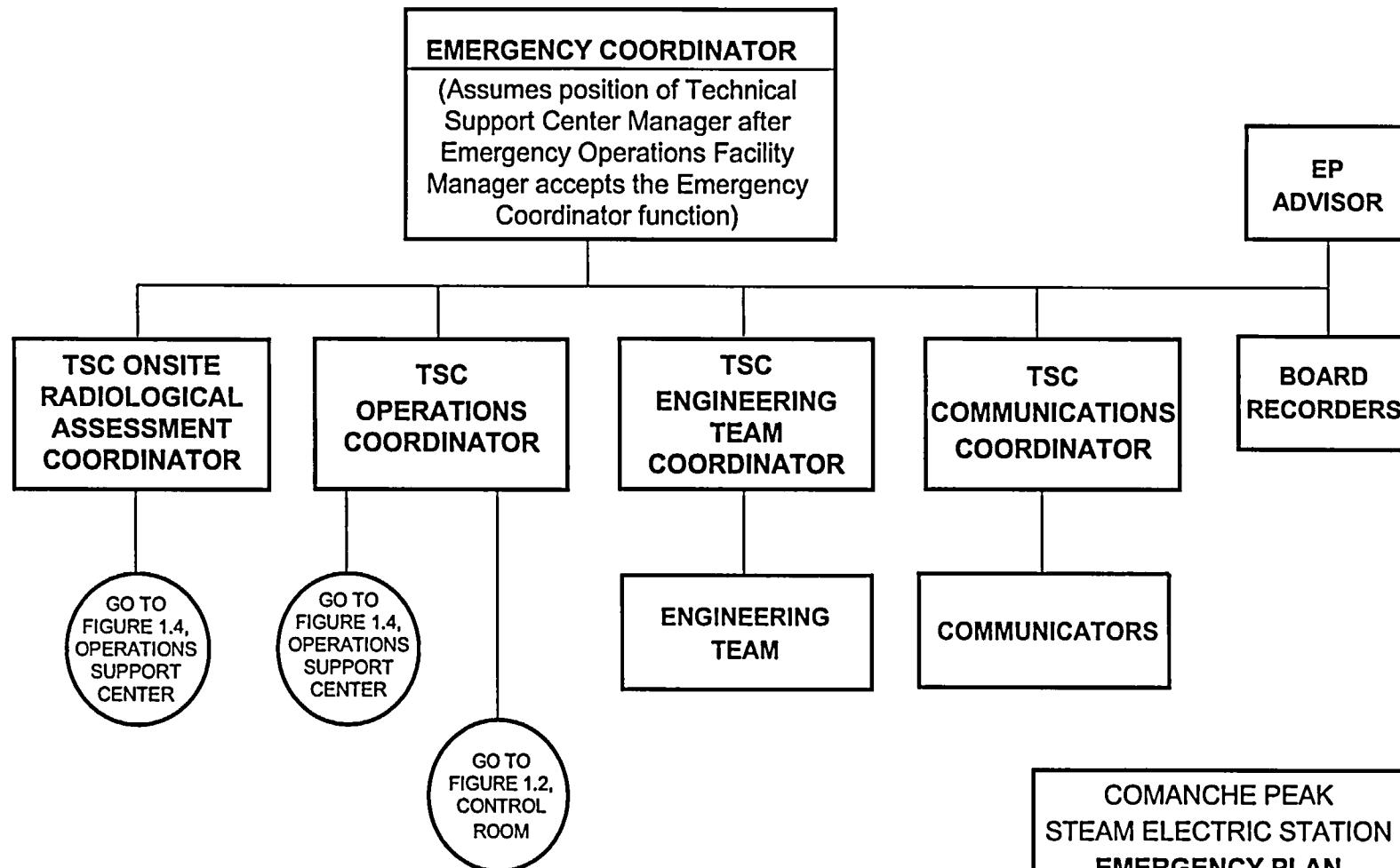
NOUE Notification of Unusual Event
SAE Site Area Emergency
GE General Emergency

Revision 28
December 17, 1999



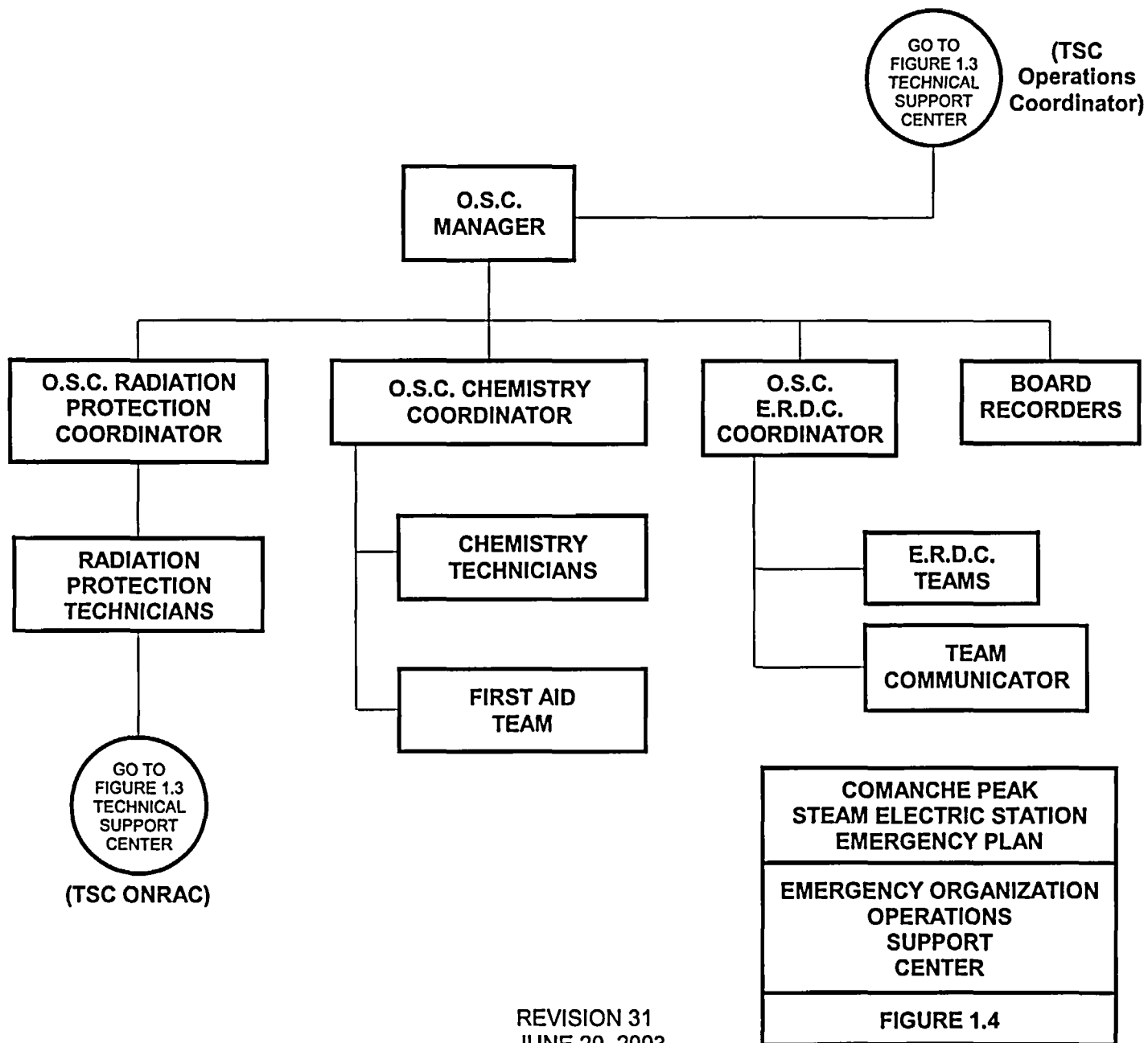
REVISION 27
JULY 24, 1998





REVISION 28
DECEMBER 17, 1999

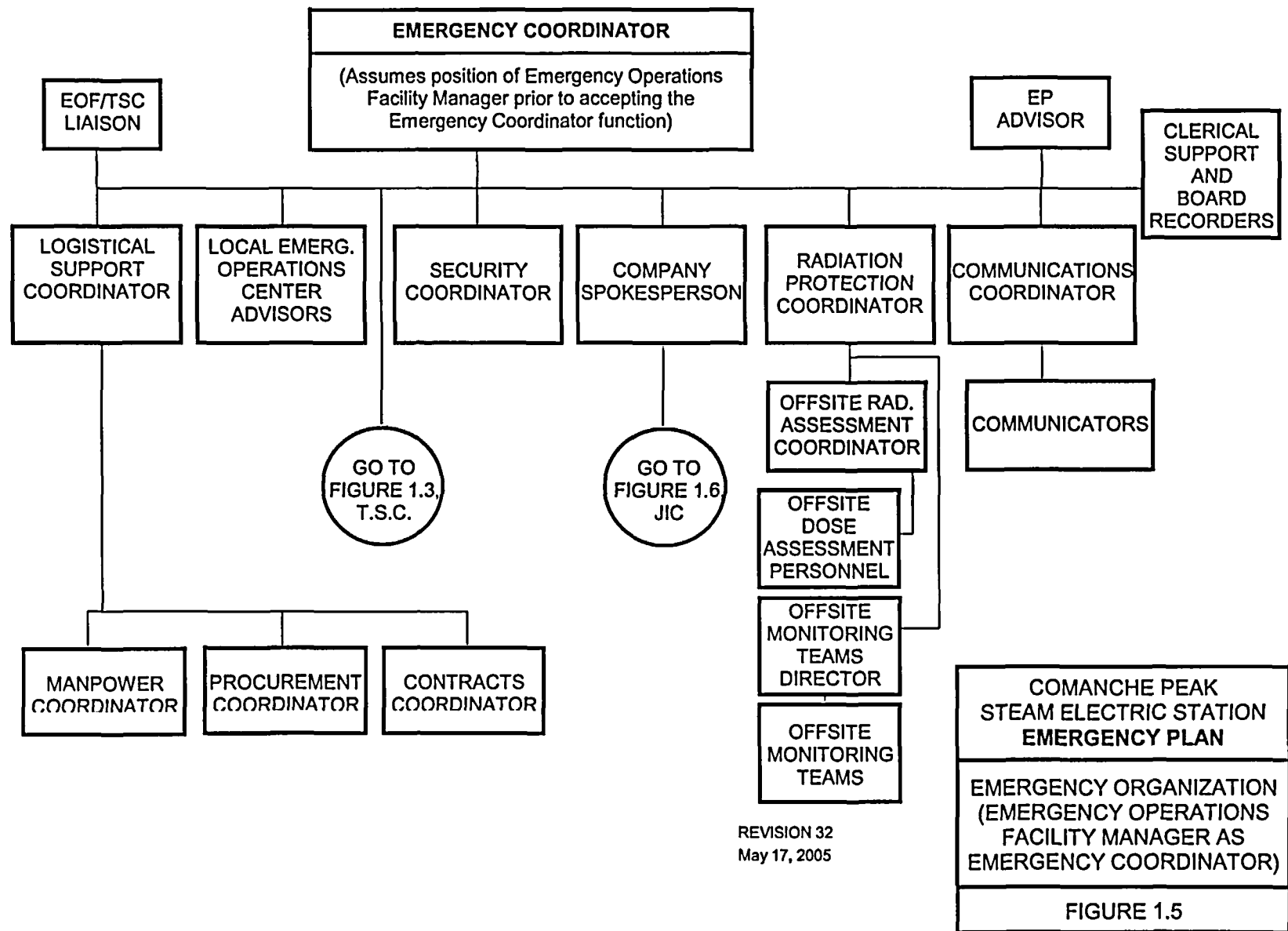
COMANCHE PEAK STEAM ELECTRIC STATION EMERGENCY PLAN
EMERGENCY ORGANIZATION (TECHNICAL SUPPORT CENTER MANAGER AS EMERGENCY COORDINATOR)
FIGURE 1.3

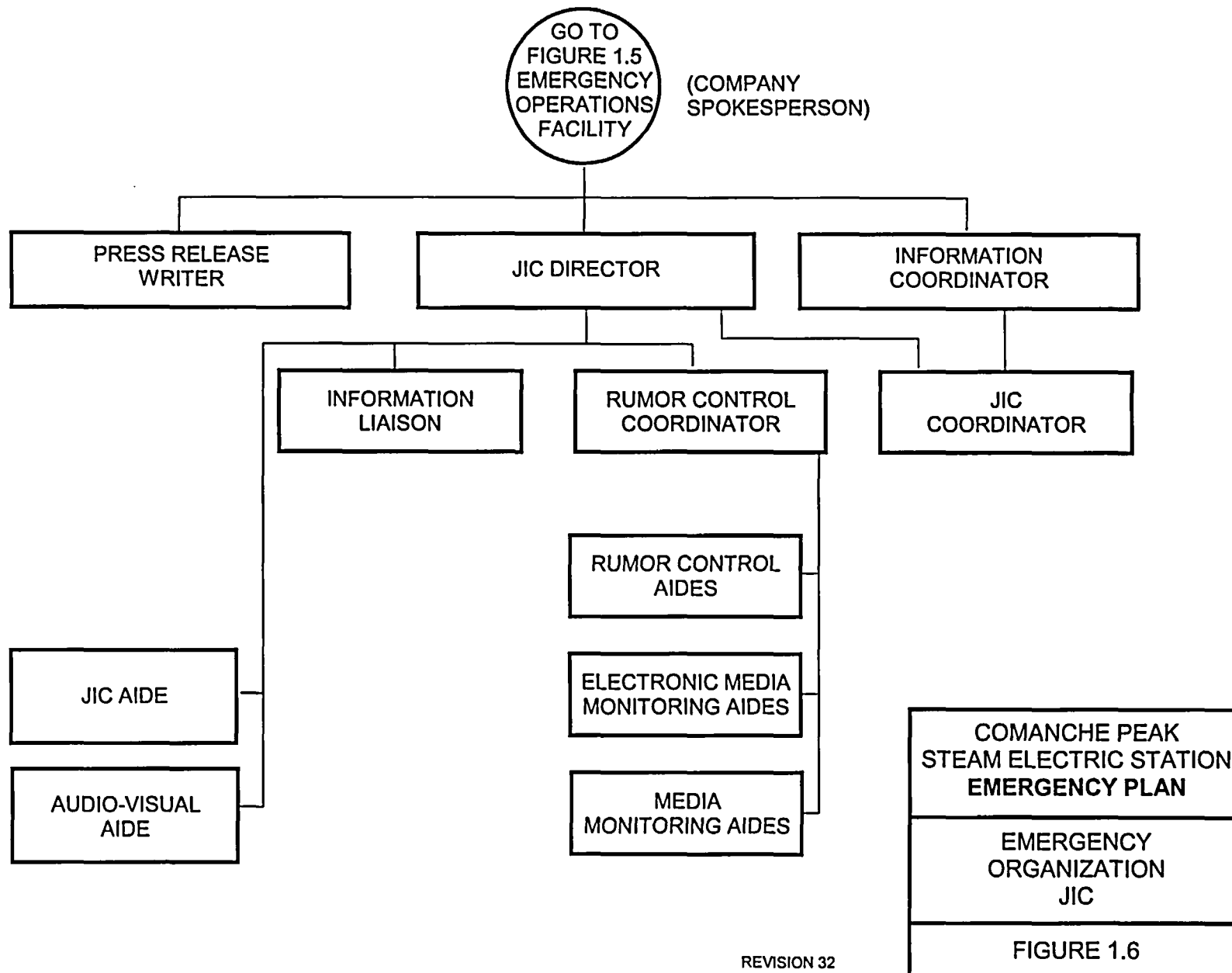


REVISION 31
JUNE 20, 2003

30

31





REVISION 32
May 17, 2005

COMANCHE PEAK
STEAM ELECTRIC STATION
EMERGENCY PLAN

EMERGENCY
ORGANIZATION
JIC

FIGURE 1.6

2.0 EMERGENCY CLASSIFICATION SYSTEM

Emergency conditions are situations which cause or threaten to cause hazards affecting the health and safety of employees or the public, or which may result in property damage. This section describes the system to be utilized at CPSES to classify possible radiological and other emergency conditions. This system is based on guidance set forth in NUREG-0654/FEMA-REP-1, Revision 1, and NUMARC/NESP-007, and is compatible with that used by state and local agencies. Emergency Action Levels (EAL) established for each emergency classification have been accepted by offsite authorities responsible for implementing protective measures for the population-at-risk.	10 19 12
---	------------------------

2.1 EMERGENCY CLASSIFICATIONS

The four Emergency Classifications are:	8
---	---

- | | |
|----------------------------------|--|
| a. Notification of Unusual Event | |
| b. Alert | |
| c. Site Area Emergency | |
| d. General Emergency | |

The first two classes, Notification of Unusual Event and Alert, are designed to provide early notification to offsite officials of the occurrence of minor events at CPSES which might escalate if incorrect actions were taken or subsequent equipment failure occurred. The Site Area Emergency class includes conditions in which releases are occurring or are expected to occur, or where core degradation may be indicated. The General Emergency class includes situations in which actual or imminent core degradation or melting is occurring with potential for or loss of containment integrity. A gradation of responses is provided to assure prompt action whether the event intensifies or diminishes.	10
---	----

Initiating Conditions (ICs) which determine the appropriate classification are generally described in the following paragraphs and in Table 2.1. Specific instrument readings, parameters or equipment status are used to determine whether an Emergency Action Level has been reached as specified in the appropriate Emergency Plan Procedures. If an emergency changes in severity the situation is reassessed and reclassified (if appropriate) and corresponding actions will be taken.	25 11 10
--	--------------------

2.1.1 A brief discussion of each emergency classification is provided below.	25
--	----

a. NOTIFICATION OF UNUSUAL EVENT

| 10

This classification includes the least severe events requiring offsite notification. This emergency classification will be declared whenever significant events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant. In general, no releases of radioactive material requiring offsite response or radiological monitoring are expected unless further degradation of plant safety systems occurs.

b. ALERT

| 10

The Alert class is the second emergency classification in increasing order of severity. An Alert will be declared whenever events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Limited releases of radioactivity may occur.

c. SITE AREA EMERGENCY

| 10

The Site Area Emergency class is the third emergency classification in increasing order of severity. A Site Area Emergency will be declared whenever events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Some releases of radioactivity from the plant are likely or a core degradation situation may be indicated.

d. GENERAL EMERGENCY

| 10

The General Emergency class is the most severe emergency classification. A General Emergency will be declared whenever events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for, or loss of, containment integrity. Significant releases of radioactivity from the plant are likely.

2.2 EMERGENCY CLASSIFICATION INITIATING CONDITIONS

Emergency Plan Procedures identify specific conditions and associated limits which serve as the basis for initiating appropriate accident assessment and emergency response actions prescribed in this plan. As the severity of each event is identified, the event is classified (or reclassified), based on instrument readings, equipment status and other parameters set forth in appropriate Emergency Plan Procedures to assure appropriate emergency response actions.

| 19

The ICs/EALs specified in Emergency Plan Procedures are based on criteria in one or more of the following documents:

- a. Plant system design specifications
- b. Plant Technical Specification limits

CPSES/EP

- c. FSAR accident analyses
- d. 10CFR, Part 20 and 10CFR, Part 100 limits
- e. EPA Protective Action Guides
- f. NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations"
- g. NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" | 9
- h. NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels" | 19

TABLE 2.1
INITIATING CONDITIONS FOR EMERGENCY CLASSIFICATIONS
Page 1 of 2

CATEGORIES	NOUE	ALERT	SAE	GE
Radioactive Effluent Release	Rad release above limits	Rad release or levels significantly above limits	Rad release which could result in doses approaching EPA PAG's	Rad release which would result in doses at or above EPA PAG's
Loss of Reactor Coolant Boundary	RCS leak above limits	RCS leak significantly above limits	LOCA > makeup capacity ----- Significant RCS leak with indication of fuel damage	Large LOCA with indication of fuel damage and potential loss of Containment integrity
Steam Generator Tube Rupture	RCS leak to S/G above limits ----- RCS leak to S/G above limits with sustained steam release to Containment on same S/G	RCS leak to S/G above limits with indication of fuel damage ----- RCS leak to S/G above limits with indication of fuel damage and sustained steam release to Containment ----- RCS leak to S/G above limits with sustained steam release to atmosphere on same S/G ----- S/G tube rupture > makeup capability ----- S/G tube rupture > makeup capability with sustained steam release to Containment	RCS leak to S/G above limits with indication of fuel damage and sustained steam release to atmosphere ----- RCS leak to S/G above limits with indication of fuel damage and sustained steam release to Containment and potential loss of Containment ----- S/G tube rupture > makeup capability with sustained steam release to atmosphere ----- S/G tube rupture > makeup capability with sustained steam release to Containment and potential loss of Containment ----- S/G tube rupture > makeup capability with indications of fuel damage	S/G tube rupture > makeup capability with indications of fuel damage and sustained steam release to atmosphere ----- S/G tube rupture > makeup capability with indications of fuel damage and sustained steam release to Containment and potential loss of Containment
Fuel Element/Cooldown Events	Indication of fuel damage ----- Sustained Steam Release	Indication of significant fuel damage ----- Sustained steam release with indications of fuel damage	Indication of significant fuel damage with possible loss of coolable geometry ----- Indication of major fuel damage	Indication of major fuel damage with possible loss of coolable geometry and potential loss of Containment integrity

29

TABLE 2.1
INITIATING CONDITIONS FOR EMERGENCY CLASSIFICATIONS
Page 2 of 2

CATEGORIES	NOUE	ALERT	SAE	GE
Loss of Electrical Power/ Assessment Capabilities/ Admin	Loss of all offsite power ----- Significant loss of offsite communications or onsite plant monitoring ----- Failure to comply with Tech Spec Requirements	Loss of all 1E AC or DC power ----- Significant loss of monitoring capability with plant in transient	Sustained loss of all 1E AC or DC power	Sustained loss of all 1E power and sustained loss of all AFW
Safety System Failure or Malfunction	Pressurizer or steam generator safety or relief valve fails to reset	Loss of ability to maintain Mode 5 or 6. ----- Failure of RPS to initiate and complete an automatic RX trip	Failure of RPS to initiate and complete an automatic RX trip and manual trip was not successful ----- Loss of ability to maintain plant within appropriate mode (1,2,3 or 4)	Failure to automatic and manual RX trip resulting in core damage or loss of coolable geometry
Loss of Plant Control/ Security Compromise	Credible security threat	On going security threat ----- Loss of Control Room habitability	Significant security breach/compromise ----- Control Room habitability lost and control not established at remote shutdown panel	Plant security lost
Natural Phenomena	Natural phenomena (eg, earthquake, flooding, tornado, etc.) threatening plant	Significant natural phenomena threatens plant		
Other Hazards	Hazards (eg, explosion, aircraft crash, toxic gas, fire, etc.) threatening plant ----- Other conditions which indicate a potential degradation of level of safety of plant	Hazards threaten safety systems ----- Other conditions which indicate an actual or potential substantial degradation of level of safety of plant	Other conditions which indicate actual or likely major failures of plant functions needed for the protection of the public	Potential exists for uncontrolled releases which can reasonably be expected to exceed EPA PAG plume expose levels outside the EAB

3.0 NOTIFICATION METHODS AND PROCEDURES

This section describes methods for notifying local and State authorities and the CPSES Emergency Response Organization (ERO) in the event of a declared emergency classification at CPSES. Details required in INITIAL and FOLLOWUP messages are also described.

28

Emergency Plan Procedures (EPP's) describe processes for performing these notifications and contain the message format for transmitting information to local and State Emergency Operation Centers (EOCs). EPPs also describe maintenance of the CPSES ERO Roster and the Emergency Facility Telephone Directory that lists emergency telephone numbers for offsite agencies and authorities.

Upon declaration of an emergency at CPSES, the CPSES ERO and the CPSES Security Shift Supervisor are notified using either the plant page party system, the intraplant telephone system or commercial telephone (see Section 1.1.2 discussion of notification). The pager system, described in Section 4.6, is an alternate means to notify selected members of the ERO.

Offsite authorities are notified via dedicated telephone, commercial telephone or telecopier.

10

More information regarding communication systems may be found in Section 4.

28

This plan section also describes how the populace within the 10-Mile Emergency Planning Zone (EPZ) is alerted to and advised of a CPSES emergency by local officials.

3.1 NOTIFICATIONS

3.1.1 INITIAL Notifications

INITIAL notifications from CPSES to local and State authorities are performed when the following conditions occur:

- Initial declaration of an emergency classification (Notification of Unusual Event, Alert, Site Area Emergency, General Emergency)
- Escalation of an emergency classification
- Initial Protective Action Recommendation (PAR)
- Change in a PAR
- Emergency termination

INITIAL notifications shall begin no later than fifteen (15) minutes after one of the above conditions are met.

INITIAL notifications are made to the following offsite authorities/locations:

- Somervell County EOC
- Hood County EOC
- Texas Department of Public Safety in Waco, Texas

INITIAL notifications, either verbal or via Notification Message Form, to Somervell County EOC, Hood County EOC, and DPS Waco provide the following information:

28

- CPSES Communicator's name
- Emergency Classification and brief description of emergency
- Warning of whether an emergency-related radiological release is occurring
- PARs, if any and if so, what sectors and Emergency Response Zones (ERZs) are affected.

The first Notification Message Form sent from CPSES to offsite authorities is verified authentic as specified in operating procedures of the Texas Department of Public Safety Communications Center, Region 6 Headquarters, Waco, Texas.

3.1.2 Notification of NRC

The NRC Operations Center should be immediately notified after notification is made to those offsite authorities identified above. The NRC should always be notified within one hour after the emergency was declared.

30
28

3.1.3 FOLLOWUP Notifications

FOLLOWUP notifications are made to status ongoing emergency response efforts.

FOLLOWUP notifications are made to offsite authorities approximately every hour unless otherwise requested by these authorities.

In addition to information required for an INITIAL notification, the following information is provided in the FOLLOWUP notification:

- Meteorological conditions (wind velocity, direction, temperature, atmospheric stability data, and form of precipitation, if any)
- IF needed, requests for onsite support.
- IF requested, by the Texas Bureau of Radiation Control:
 - (a) Type of radiological material release (whether actual or projected): airborne, waterborne or surface spill and estimated or known release duration
 - (b) Estimated or known quantities of radioactive material released.
 - (c) Point of release
 - (d) Chemical and physical form of released material, including estimates of relative quantities and concentrations of noble gases, radioiodines and particulates.
 - (e) Estimates or known quantities of radioactive surface contamination, onsite or offsite.

CPSES/EP

- | | | |
|-----|--|----|
| (f) | Actual or projected dose rates and integrated doses at the site boundary, and at two, five and 10 miles, and affected sectors and Emergency Response Zones (ERZs). | 28 |
| (g) | Prognosis for escalation or termination of emergency based on current plant information. | |
| (h) | Licensee emergency response actions underway. | |

3.2 PUBLIC WARNING

An Alert and Notification System consisting of 72 sirens within the 10-Mile Emergency Planning Zone (EPZ) is owned, maintained and tested by TXU Power in accordance with CPSES Emergency Plan Procedures. The system was designed, installed and tested to meet the requirements of the Federal Emergency Management Agency (FEMA). The resident and transient population within the 10-mile EPZ is alerted to an emergency at CPSES by the Alert and Notification System. Upon being alerted by this system, the populace has been informed to tune their radios to the primary Emergency Alert System (EAS) station to obtain current information and recommended protective actions.	32 28
--	----------

The EAS provides emergency related information to the general public in the CPSES area over radio station WBAP (820 AM) and other broadcast media which re-broadcast EAS messages provided by the primary station. CPSES and state emergency response personnel provide protective action recommendations to local officials; however, information and instructions provided to the general public via the EAS originates from the county officials.

Local officials, primarily County Judges and County Sheriffs, authorize use of and are responsible for operating the Alert and Notification System and providing messages to the EAS stations. Preformatted EAS messages are included in county and State emergency plans.

Operation of the Alert and Notification System is accomplished from either county's Emergency Operations Center (EOC). Normally, each county EOC will operate those sirens within its jurisdiction; however, if needed, either EOC can operate the entire system. The 10-mile EPZ is divided into quadrants. Sirens located in each quadrant are programmed to a unique control code. Each quadrant can be activated independently; however, each siren can be operated individually for purposes of testing.

3.3 METHODS OF PROVIDING PUBLIC INFORMATION REGARDING PROTECTIVE ACTION MEASURES

Public warning, discussed above, is part of the mechanism for providing information to the public. Preceding and continuing into the CPSES operations phase, emergency response information is provided to the public within the 10-mile EPZ. Local residents are provided printed media which provides instructions for emergency actions. Information regarding emergency actions is also provided by printed media at various locations or establishments within the 10-mile EPZ, and in local telephone directories. Additional information about public information is provided in Section 5 of this plan.

4.0 EMERGENCY COMMUNICATIONS

Comprehensive communication systems are provided to ensure reliable intraplant communications, plant-to-offsite telephone and carrier communications, and offsite emergency response communications with public safety agencies. Table 4.1, "Communications Interfaces" describes CPSES communication interfaces between each emergency response facility and various responding organizations and offsite agencies.

10
6
25

Effective communications between personnel during plant start-up, operation, shutdown, refueling and maintenance activities are provided by private automatic branch exchange (PBX) telephone, sound-powered telephone, plant page-party system and two-way radio systems.

6

Emergency Plan Procedures provide instructions for notification of CPSES emergency response personnel, and offsite organizations who respond to, or are required to be cognizant of, an emergency at CPSES. Procedures also control emergency response personnel call lists and provide instructions for completing initial and follow-up notification messages to ensure accurate information is transmitted to offsite authorities.

10

Communications responsibilities for organizations are described in Table 4.2, "Emergency Response Communications Responsibilities and Interfaces." This table lists titles of individuals who have primary responsibilities for emergency response communications.

25
10

4.1 SYSTEM DESCRIPTION

The following systems comprise intraplant and plant-to-offsite communication systems for both units at CPSES:

6

4.1.1 PUBLIC ADDRESS SYSTEM

The plant page-party system, part of the public address system, provides two independent channels of communication: page and party lines. Page-party line loud speakers are powered by individual amplifiers, and power to this system is supplied from a source which remains available in the event of a loss of offsite power.

10
6

The system layout allows Control Room personnel to announce emergency information to all plant areas and permanent buildings for both units. Similar capabilities exist in the Technical Support Center and the Emergency Operations Facility for use by Emergency Coordinators. This system also permits two-way communications between two or more locations. Speakers and microphone handsets are installed at locations vital to operation of the plant and safety of personnel. Voice paging channel output is audible over expected noise levels under normal and emergency conditions.

12

10
6

Four independent party lines are provided to permit communications between handset stations only, thereby making the plant and Control Room paging channel available to others. At least one independent party line, to be selected by the on-shift Control Room staff, should be dedicated for use during any ongoing emergency. All four party lines are

32

11
32

available at all handset stations, except those located in plant elevators where only one	10
page-party line is available. Selection of a desired channel is achieved by a multi-position	32
switch provided as part of the handset station. The page channels and the party line	
channels are independent and may be used simultaneously without interference.	

4.1.2	<u>INTRAPLANT TELEPHONE SYSTEM</u>	10
-------	------------------------------------	----

An independent telephone system, the PBX telephone system, is provided for uninterrupted	12
private communication between virtually all areas of Comanche Peak Steam Electric Station.	

The PBX telephone system is integrated with the public telephone system through an	
isolating device to ensure that a single failure in either does not affect safe and reliable	
operation of the other system. Power is supplied to the PBX telephone system from the	10
non-ESF bus. When the PBX telephone system's normal AC power supply is lost, a battery	
backup power supply system keeps the PBX telephone system operational. In addition, a	
number of predetermined telephone stations which get their power from the public telephone	
system remain operable.	

4.1.3	<u>INTRAPLANT SOUND-POWERED TELEPHONE SYSTEM</u>	
-------	--	--

A sound powered telephone system, independent of other communications systems and	10
external power sources, is provided to serve three purposes: (1) provide communications in	
critical in-plant areas, (2) serve as backup to plant page-party system in critical in-plant	
areas, and (3) provide uninterruptible communication channels for maintenance, calibration,	
testing and refueling activities. This system provides standby communications capability and	
does not depend on external sources of power.	

This system consists of three subsystems per unit as follows:	6
---	---

Subsystem One:	Maintenance Loops - Consists of two-channel, hard-wired	6
	communications link between Control Room area and critical in-plant	
	areas.	

Subsystem Two:	Refueling Loops - Consists of two-channel, hard-wired	6
	communications link between Control Room area and fuel handling	
	areas. This subsystem is provided primarily for refueling operations.	

CPSES/EP

Subsystem Three:	Emergency Loops - Consists of a two-channel, hard-wired communications link between Remote Shutdown Panel and safety related equipment areas. Cables of this subsystem are routed in separate conduits from other subsystems. This subsystem is provided primarily for communications in the unlikely event the Control Room becomes uninhabitable.	10
	The headset jack stations are located on panels in the Control Room and in critical areas.	6
	Communications can be established between the Control Room and any local panel or between any two local panels by plugging the headsets into jack stations mounted in the Control Room, or in or near the panels. The number and location of sound-powered telephone system receptacles provide for sufficient communications to place the plant in hot shutdown or cold shutdown mode from the Control Room or Remote Shutdown Panel and other areas. The sound-powered telephone system can be used as backup to the plant page-party system in critical equipment areas of the plant. One independent howler loop per unit is provided for sound-powered signaling.	6
4.1.4	<u>INTRAPLANT RADIO TRANSMITTER-RECEIVER SYSTEM</u>	10
	Two-way radio transmitter-receiver systems, operating on unique wavelengths, is provided for emergency response communications between emergency response support personnel (e.g., onsite and offsite radiological monitoring teams and emergency repair and damage control teams) and various emergency response facilities. Details of this system can be found in the applicable Emergency Plan Procedure.	12
	For the CPSES Security Organization's use, separate communication channels of unique wavelength are provided to enable two-way radio communication between security posts and the various plant buildings. Portable transmitter-receivers are provided to Security personnel for communication between areas of the plant.	
	To improve reception in plant buildings, monitor receivers or coaxial slotted cables, or both, are installed where required. The radio transmitter carrier frequencies are chosen to preclude interference with radio controlled cranes and carrier frequencies used by the Switchyard remote supervisory carrier current equipment.	10
	The intraplant radio system has been upgraded to carry the station operations frequency. This modification allows operations or maintenance personnel, as well as emergency response personnel, to use a radio inside station structures.	10
4.1.5	<u>PUBLIC TELEPHONE SYSTEM</u>	
	The public telephone system is interconnected to the Intraplant Telephone System (PBX telephone system) by trunk lines. This permits	6

CPSES/EP

access to the public telephone system from virtually any area within Comanche Peak Steam Electric Station.	12
4.1.6 <u>DIRECT TELEPHONE LINE TO THE SYSTEM DISPATCHER</u>	10
As an aid to power plant and transmission system operation, a direct leased telephone line is available to CPSES operators in the Control Room. This line is independent of the PBX system. The System Operations Center, which is manned at all times, makes the direct line available for outside communication in the event of an emergency.	25 10
4.1.7 <u>OTHER TELEPHONE LINES</u>	
A number of trunk lines provide direct communications between offsite locations and various CPSES facilities. These lines allow offsite emergency response organizations to contact CPSES emergency response personnel at any time to verify initial communications and to establish, if necessary, communications with their personnel and facilities stationed onsite; allow CPSES radiological monitoring teams to transmit field data should their radio fail, and allow the general public direct access to CPSES Public Information personnel manning rumor control telephones.	6
4.1.8 <u>EMERGENCY EVACUATION ALARM SYSTEM</u>	10
The emergency evacuation alarm is generated by a solid state multifrequency audio oscillator capable of producing five distinctive tones which can be heard over all plant paging zones, except the Control Room, via the plant page-party system. The evacuation alarm is a pulse tone at a frequency of 475 (± 25) hertz at a rate of 4.5 (± 0.5) cycles/sec. This tone meets specifications described in ANSI/ANS 2.3-1979 and Regulatory Guide 8.5.	6 32 12 6
The emergency evacuation alarm system, including the multifrequency audio oscillator, is powered by a source which remains available in the event of a loss of offsite power and provides a unique alarm signal to prompt personnel evacuation in the event of an emergency. This alarm is initiated by the Control Room operator in the event that a site evacuation is ordered by the Emergency Coordinator.	

CPSES/EP

4.1.9	<u>DIRECT LINE TO STATE AND LOCAL EMERGENCY OPERATIONS CENTERS</u>	10
	A dedicated line has been established that simultaneously links CPSES with the Texas Department of Public Safety office in Waco, the Somervell County Emergency Operations Center and the Hood County Emergency Operations Center. When a call has been initiated, the other telephones ring until answered. Communications by CPSES individuals, unrelated to an emergency, exercise/drill, system test or Public Information notification shall not be conducted on this line.	25 12
4.2	<u>FEDERAL TELECOMMUNICATIONS SYSTEM</u>	27
	The Federal Telecommunications System (FTS) is an independent phone link used for communications between CPSES and the NRC. At CPSES, the FTS lines are used as the Emergency Notification System (ENS), Health Physics Network (HPN), and for NRC personnel communications. Extensions to the FTS are in the Control Room, Technical Support Center (TSC) and Emergency Operations Facility (EOF). A communications equipment test shall be conducted monthly in accordance with applicable Emergency Plan Procedures and shall involve the ENS telephone in the Control Room and the ENS and HPN telephones in the TSC and EOF.	24 27 24
4.3	<u>FACSIMILE COMMUNICATIONS</u>	
	Facsimile communications capability is provided via the PBX telephone system between the Control Room, Technical Support Center, Emergency Operations Facility, Operations Support Center, Corporate Office, NRC, state agencies and local county Sheriff's offices.	13
4.4	<u>AUTODIAL CALLING SYSTEM</u>	24
	An automatic dialing system is one of the methods used to call-out Emergency Response Personnel. The system is used at an Alert or higher class emergency. As an individual is contacted, a message is played informing that an emergency is in progress and of the action(s) which should be taken. This system uses multiple telephone lines to contact the response organization. Should this system fail to operate, a backup notification method shall be used to contact emergency personnel.	28 25 16
4.5	<u>CPSES MICROWAVE COMMUNICATIONS SYSTEM</u>	24
	TXU Power has installed and maintains a microwave communications system between the Comanche Peak Steam Electric Station and the Dallas Area. This system increases the reliability of the CPSES plant-to-offsite telephone system by providing an alternate offsite path from the local Glen Rose telephone system for CPSES telephone trunks. This microwave system consists of microwave towers located at the CPSES site, at TXU Power facilities in the Cedar Hill area of Dallas and at two locations in between. This microwave system provides circuits to CPSES which are used for local Dallas commercial trunk lines, and other TXU Power telephone and data circuits.	32 24 32
4.6	<u>PAGER SYSTEM</u>	24
	A pager system is currently in service at Comanche Peak Steam Electric Station. This system serves as an alternate method of notifying selected members of the Emergency Organization that an emergency is in progress. Activation of the pager system is at the discretion of the Emergency Coordinator and is normally carried out at an Alert or higher emergency classification.	12

TABLE 4.1
COMMUNICATIONS INTERFACES
Page 1 of 1

	Control Room	Technical Support Center	Operations Support Center	Emergency Operations Facility	JIC	Security
Control Room		A, C, D, E, F, G	A, B, F, G	A, B, C, D, F, G	A, G	A, F
Technical Support Center	A, C, D, E, F, G		A, B, F, G	A, B, C, D, F, G	A, G	A, F
Operations Support Center	A, B, F, G	A, B, F, G		A, B, F, G		A, F
Emergency Operations Facility	A, B, C, D, F, G	A, B, C, D, F, G	A, B, F, G		A, G	A, F
JIC	A, G	A, G		A, G		
Security	A, F	A, F	A, F	A, F		
NRC Regional Incident Resp Ctr	A, D, G	A, D, G		A, D, G		
NRC Operations Center	A, D, G	A, D, G		A, D, G		
Dept of Public Safety, Waco	A, C, G	A, C, G		A, C, G	A	
Bureau of Radiation Control, Austin		A, G		A, G	A	
Hood County EOC	A, C, G	A, C, G		A, C, G	A	A, B
Somervell County EOC	A, C, G	A, C, G		A, C, G	A	A, B
Offsite Support Agencies and Off-duty personnel	A	A		A		A
Access Control		A	A, F			
Onsite/Inplant Survey Teams		B, E, F	B, F			
Offsite Monitoring Teams			A, B	A, B		
System Dispatcher	A, H					
Corporate Security				A		A
TXU Power Divisions		A, G		A, G		
Uninvolved Government Officials				A		
Offsite Support Contractors				A		
INPO and Other Utilities		A, G		A, G		

A Telephone
B Two-way radio
C State/County Dedicated System
D Federal Telecommunications System

E Sound-Powered Telephone
F Plant Page-Party System/All-Page
G Telecopier
H Point-to-point

Note: This table shows communication interfaces between organizations which normally communicate with one another. If no communication is expected between organizations, then no interface is shown.

CPSES/EP

TABLE 4.2

EMERGENCY RESPONSE COMMUNICATIONS
RESPONSIBILITIES AND INTERFACES

<u>Emergency Response Facility/Organization</u>	<u>Primary Responsibility</u>	<u>Interface</u>	12 10
Control Room	Shift Manager	Control Room personnel	24 6
Technical Support Center	TSC Manager	Communicator	
Emergency Operations Facility	EOF Manager	Communicator	
Operation Support Center	OSC Manager	Team Communicator	27 12 25
Onsite Survey Teams	OSC Manager	Team Communicator	27
Offsite Monitoring Teams	EOF Radiation Protection Coordinator	Offsite Monitoring Teams Communicator	12 13
Hood County Emergency Operations Center	County Sheriff	Dispatcher	25 6
Somervell County Emergency Operations Center	County Sheriff	Dispatcher	
Texas Department of Public Safety, Waco	Communications Supervisor	Dispatcher	9
NRC Operations Center	Duty Officer	Duty Officer	13 24
NRC-Region IV	Duty Officer	Duty Officer	6
Lake Granbury Medical Center	Hospital Administrator	Hospital Operator	27
NOTE: The individual delegated responsibility for communications is not required to operate the equipment.			10

Revision 27
July 24, 1998

5.0 PUBLIC EDUCATION AND INFORMATION

A public information program has been developed with state and local governments to inform the public within the 10-mile Emergency Planning Zone (EPZ). Emergency information is provided annually to residents through the distribution of printed media as decided by TXU Power management; information is provided annually to the transient population by placement of posters and distribution of printed media to selected local businesses, public buildings, recreational areas, etc.

The information provided addresses the following:

- Method of public notification
- Protective actions
- Instructions for evacuation
- A map of the EPZ showing evacuation zones and routes
- The location of Relocation Centers
- Primary EAS station that broadcasts emergency information
- Telephone numbers for obtaining information
- A method for those with special needs to inform the local responsible agency of their location and the nature of the special assistance required.
- Educational information on radiation

The news media is provided information and offered training annually about emergency plans, radiation and contact points for information during an emergency.

5.1 PUBLIC INFORMATION RELEASES DURING EMERGENCY CONDITIONS

In the event of an emergency, news conferences may be conducted at the Nuclear Operations Support Facility (NOSF) auditorium. News conferences are coordinated with federal, state and local public information personnel. Any emergency related public information releases shall be made in accordance with Emergency Plan Procedures.

5.2 RUMOR CONTROL

Telephones are established for rumor control. During an emergency, personnel use these telephones as part of the public information response.

6.0 EMERGENCY FACILITIES AND EQUIPMENT

25

This section describes emergency response facilities and equipment used by the CPSES Emergency Response Organization in the event an emergency is declared at CPSES.

Facility activation is dependent on the emergency classification declared; however, the Emergency Coordinator has the option of activating one or all of the CPSES emergency response facilities at an emergency classification less severe than that prescribed in Emergency Plan Procedures. Details regarding activation and staffing of each emergency response facility are provided in the Emergency Plan Procedures.

6.1 CONTROL ROOM

6.1.1 Function

The Control Room (CR) is the onsite location from which the CPSES is operated. The CR is also the location where the initial assessment and coordination of corrective actions for emergency conditions takes place.

6.1.2 Location

The CR is located at elevation 830' 0" of the Control Building.

6.1.3 Staffing and Training

The CR, because of its role in normal Station operations, is always staffed and functional. The staffing requirements and responsibilities of CR personnel are discussed in section 1.1.2.1. Table 1.1 shows the staffing requirements for emergencies. Figure 1.2 shows an organizational chart of the CR staff.

Training of CR staff is referenced in section 13.0.

27

6.1.4 Habitability

25

The habitability system for the CR is described in FSAR Section 9.4.1, "Control Room Area Ventilation System". The CR is designed to be habitable following design basis accidents (See FSAR Section 15.6.5.4.). Details of CR habitability are presented in the CPSES Design Basis Documents (DBDs).

6.1.5 Communications

The communication system for the CR is described in Section 4.0 and Table 4.1.

Emergency response personnel in other emergency facilities interface with the CR staff through the Technical Support Center. Only personnel performing activities coordinated directly by the CR staff communicate directly with the CR.

6.2 TECHNICAL SUPPORT CENTER

25

6.2.1 Function

The CPSES Technical Support Center (TSC) provides the following functions:

- Provide plant management and technical support to plant operations personnel during emergency conditions.
- Relieve the control room operators of peripheral duties and communications not directly related to reactor system manipulations.
- Prevent congestion in the control room.
- Perform Emergency Operations Facility (EOF) functions until the EOF is activated.
- Serve as primary communications center for the plant during the emergency.
- Provide technical support during recovery operations following an emergency.

The TSC is the emergency operations work area for designated technical, engineering and senior management personnel, and a small staff of NRC personnel. The TSC Manager uses the resources of the TSC to provide guidance and technical assistance to the Control Room during an emergency. The TSC has facilities to support plant management and technical personnel who will be assigned there during an emergency.

6.2.2 Location

The TSC is located above the Control Room, at elevation 840' 6" of the Control Building. The TSC and CR are connected by a common stairwell, which may provide face-to-face interaction between CR personnel and the TSC Manager. TSC personnel have access to information in the CR that is not available through the TSC data system.

The stairwell between the TSC and CR is located outside the CR environment; therefore, provisions have been made for safe and timely movement of personnel under emergency conditions. These provisions include considerations of effects of direct radiation and airborne radioactivity from inplant sources.

There are no major security barriers between the TSC and CR, other than access stations at each facility.

6.2.3 Staffing and Training

Personnel assigned to the TSC are notified at an Alert or higher emergency classification and should activate the facility as soon as possible with a goal of sixty (60) minutes in accordance with Emergency Plan Procedures. Activation of the TSC ensures only designated operating personnel are in the CR and that needed technical support is provided without obstructing plant manipulations or overcrowding the CR.

28

25

The staffing requirements and responsibilities of TSC personnel are discussed in section 1.1.2.2. Table 1.1 shows the staffing requirements for emergencies. Figure 1.3 shows an organizational chart of the TSC staff.

25

Training of TSC staff is referenced in section 13.0.

27

6.2.4 Size

25

The TSC is located in an area that is large enough to provide:

- Work space for the personnel assigned to the TSC.
- Space for the TSC Data Display Equipment.
- Space for unhindered access to communication equipment by all TSC personnel.
- Space for storage of and/or access to plant records and historical data.
- A separate room for private NRC consultations.

The TSC working space is sized for 25 persons, including five NRC personnel. The TSC floor space is approximately 1500 sq. ft.

6.2.5 Structure

The TSC is located in a Seismic Category I structure, which is able to withstand the most adverse conditions expected, including earthquakes, high winds, and floods.

6.2.6 Habitability

The Habitability System for the TSC is the same system that is provided for the CR. See Sections 6.1.4 and 6.6 for a more detailed description of facility habitability.

6.2.7 Communications

The communication system for the TSC is described in Section 4.0 and Table 4.1.

6.2.8 Instrumentation, Data System Equipment, and Power Supplies

The TSC Data System is provided as part of the integrated Emergency Response Facility (ERF) Computer System. The ERF Computer System gathers, stores, and displays data needed in the TSC to analyze the plant conditions. The TSC Data System performs its function independent of action in the CR and without degradation or interfering with CR and plant functions. Details of the ERF Computer System are described in FSAR Section III.A.1.2 and the CPSES DBDs.

29

6.2.9 Records Availability and Management

25

The TSC has a repository of plant records and procedures at the disposal of the TSC personnel to aid in their technical analysis and evaluation of emergency conditions. The following reference material is provided in the TSC:

- CPSES FSAR
- Plant Technical Specifications
- Operating Instructions, Both Normal and Emergency
- Technical Manuals
- As-Built Drawings

6.3 OPERATIONS SUPPORT CENTER

6.3.1 Function

The Operations Support Center (OSC) is the onsite emergency response staging area separate from the CR and TSC, where operations support personnel assemble and are dispatched during an emergency. The OSC functions to:

- Provide a location where plant support can be coordinated during an emergency.
- Restrict CR access to support personnel specifically requested by the Shift Manager.

6.3.2 Location and Size

The OSC is located in the office space in the Control Building on the 810' elevation. This location provides immediate access to the plant as well as the TSC.

6.3.3 Staffing and Training

Personnel assigned to the OSC are notified at an Alert or higher emergency classification and should activate the facility as soon as possible with a goal of sixty (60) minutes in accordance with Emergency Plan Procedures.

28

The staffing requirements and responsibilities of OSC personnel are discussed in section 1.1.2.2. Table 1.1 shows the staffing requirements for emergencies. Figure 1.4 shows an organizational chart of the OSC staff.

25

Training of OSC staff is referenced in section 13.0.

27

6.3.4 Habitability

25

The OSC has the same habitability conditions as the Turbine Building but is monitored for airborne radioactivity and external (gamma) radiation (see Section 6.6). If the OSC should be unavailable for use or require evacuation, personnel should be relocated to a safe area as specified by the Emergency Plan Procedures.

6.3.5 Communications

25

The communication system for the OSC is described in Section 4.0 and Table 4.1.

6.4 EMERGENCY OPERATIONS FACILITY

6.4.1 Function

The CPSES Emergency Operations Facility (EOF) is the emergency response facility which provides the following functions:

- Management of overall CPSES response during an emergency condition.
- Coordination of radiological and environmental assessment.
- Determination of recommended public protective actions.
- Coordination of emergency response activities with federal, state, and local agencies.

The EOF is equipped with technical data displays to assist EOF personnel in diagnosis of plant conditions and to evaluate potential or actual release of radioactive materials to the environment.

6.4.2 Location

The EOF is located in the Nuclear Operations Support Facility (NOSF) which is 1.2 miles west of the reactor site.

6.4.3 Staffing and Training

Personnel assigned to the EOF are notified at an Alert or higher emergency classification and should activate the facility as soon as possible with a goal of sixty (60) minutes if a Site Area or General Emergency is declared in accordance with Emergency Plan Procedures.

When the EOF is activated, security protection will be upgraded to restrict access to those personnel assigned to the facility.

The staffing requirements and responsibilities of EOF personnel are discussed in section 1.1.2.2. Table 1.1 shows the staffing requirements for emergencies. Figure 1.5 shows an organizational chart of the EOF staff.

Training of EOF staff is referenced in section 13.0.

6.4.4 Size

The EOF is large enough to provide the following:

- Work space for the personnel assigned to the EOF.
- Space for the EOF Data Display Equipment.
- Space for unhindered access to communication equipment by all EOF personnel.

- Space for storage of and/or access to plant records and historical data.
- A separate room for private NRC consultations.

25

The EOF working space is sized for 45 persons, including federal, state, and local emergency response personnel. The EOF floor space is approximately 3,200 sq. ft.

The EOF has been designed and is equipped to support continuous operations over an extended period of time.

6.4.5 Structure

The EOF is a well engineered building meeting the Uniformed Building Code. It is designed for the expected life of the plant. The walls and ceilings are approximately eight (8) inches of concrete. The ventilation system and structure are not seismically qualified.

6.4.6 Habitability

The EOF has special shielding and ventilation provisions for habitability. The EOF is shielded to provide a gamma protection factor of \$15. The dedicated ventilation system has a High Efficiency Particulate (HEPA) filter which filters the incoming air. The ventilation system maintains a slight positive pressure in the EOF.

Should evacuation of the EOF be required, the Emergency Operations Center in Hood County Law Enforcement Center may be used as an alternate location. Radiological assessment activities may be relocated to the state's mobile radiological laboratory.

6.4.7 Communications

The communication system for the EOF is described in Section 4.0 and Table 4.1.

6.4.8 Instrumentation, Data System Equipment, and Power Supplies

The EOF Data System is provided as part of the integrated Emergency Response Facility (ERF) Computer System. The ERF Computer System gathers, stores, and displays data needed in the EOF to analyze the plant conditions. The EOF Data System performs its function independent of action in the CR and without degradation or interfering with CR and plant functions. Details of the ERF Computer System are described in FSAR Section III.A.1.2 and the CPSES DBDs.

29

25

6.4.9 Records Availability and Management

The EOF has ready access to plant records, procedures, and emergency plans needed to exercise overall management of CPSES emergency response resources. The EOF reference material includes:

- CPSES FSAR
- Plant Technical Specifications

CPSES/EP

• Operating Instructions, Both Normal and Emergency	25
• Off-site Population Distribution Data	
• Evacuation Plans	
6.5 JOINT INFORMATION CENTER	32
6.5.1 <u>Function</u>	
The function of the JIC is to provide a single contact point at CPSES for dissemination of emergency related information to the news media.	
6.5.2 <u>Location</u>	
The JIC is located in Granbury, Texas at the Granbury City Hall, 116 W. Bridge, which is greater than 10 miles from the reactor site.	32
6.5.3 <u>Staffing and Training</u>	
Personnel assigned to the JIC are notified at an Alert or higher emergency classification and should activate the facility as soon as possible with a goal of sixty (60) minutes if a Site Area or General Emergency is declared in accordance with Emergency Plan Procedures.	32 28
The staffing requirements and responsibilities of JIC personnel are discussed in section 1.1.2.2. Table 1.1 shows the staffing requirements for emergencies. Figure 1.6 shows an organizational chart of the JIC staff.	32 25 32
Training of JIC staff is referenced in section 13.0.	
6.5.4 <u>Size</u>	25
The JIC is large enough to provide for the following:	32
• Working space for the personnel assigned to the JIC.	
• Space for unhindered access to communications equipment by all JIC personnel.	
• Space for accommodating 75 media personnel.	25
6.5.5 <u>Habitability</u>	
There are no special habitability provisions taken for the JIC.	32
6.5.6 <u>Communications</u>	
The communication system for the JIC is described in Section 4.0 and Table 4.1.	

6.6	<u>EMERGENCY RESPONSE FACILITIES RADIOLOGICAL HABITABILITY</u>	25
	In addition to the habitability provisions provided for each facility, the TSC, OSC, and EOF are monitored for airborne radioactivity and external (gamma) radiation.	
	For radioiodines, portable equipment capable of continuously detecting radiiodine air activity as low as 1.0E-07 microcuries per cubic centimeter (FCi/cc) is used.	
	Noble gas (external gamma exposure) is continuously monitored using a gamma detection device set to alarm at a predetermined exposure rate or dose.	
6.7	<u>LABORATORY FACILITIES IN EOF-NOSF</u>	
	The teaching laboratory facility at the EOF-NOSF complex covers approximately 1,200 square feet and is located just outside the main entrance to the EOF.	26
	This teaching laboratory can perform radiological analysis of low activity samples to identify radionuclides and their respective activities. Considerations on the use of the laboratory are discussed in FSAR section II.B.3.4.	25
	The NOSF is the control point for receipt of field samples.	
6.8	<u>OTHER RADIOLOGICAL LABORATORY SUPPORT</u>	
	In addition to chemical and radiochemical laboratory facilities located at CPSES, the following resources are available to TXU Power in support of emergency response activities:	32
	<ul style="list-style-type: none"> • Bureau of Radiation Control mobile laboratory. (See section 1.2.4) 	25
	<ul style="list-style-type: none"> • Chemical and radiochemical laboratory facilities of neighboring nuclear utilities as coordinated by INPO. 	28
	<ul style="list-style-type: none"> • Houston Lighting and Power (See section 1.2.3) 	25
6.9	<u>DECONTAMINATION FACILITIES</u>	
	The in-plant decontamination facility is described in FSAR section 12.5.2.2.	30
	An offsite decontamination facility illustrated in Figure 6.1 is located in the Nuclear Operations Support Facility (NOSF) for use during emergency situations. Suitable decontaminants and clothing are provided. Water used for decontamination at the NOSF decontamination facility can be retained in a separate storage tank for later sampling, and if required, processing. Any solid waste generated as a result of decontamination activities shall be introduced into the Station radioactive waste processing system when appropriate.	26
6.10	<u>ONSITE EMERGENCY AID FACILITIES</u>	25
	Onsite first aid capabilities are described in sections 10.2 and 10.3.	27

6.11 EMERGENCY EQUIPMENT AND SUPPLIES

25

Each emergency response facility, as well as local hospitals and the NOSF, is supplied with emergency equipment and supplies suitable to the response expected from that facility. Section 15.0, Appendix J provides a representative listing of the emergency equipment and supplies maintained.

Inspections of the operational readiness of emergency equipment and supplies are conducted quarterly and after use. Deficiencies noted during inspections are corrected. Use of inspection checklists and follow-up actions ensures that equipment is ready for use. Sufficient reserves of equipment are maintained to replace those undergoing calibration or repair.

6.12 STATE AND LOCAL EMERGENCY OPERATIONS CENTERS

The State of Texas Emergency Operations Center (EOC) is located at Headquarters, Department of Public Safety in Austin. This facility is not continuously staffed. Its activation is at Site Area Emergency or higher classification in accordance with the Texas Emergency Management Plan.

26

The two county EOC's, within the 10-Mile Emergency Planning Zone, are located in county law enforcement centers. The Hood County EOC is in Granbury and the Somervell County EOC is in Glen Rose. These law enforcement centers are continuously staffed. County EOC activation is at Site Area Emergency or higher classification in accordance with the respective county Manual of Emergency Procedures.

25
26
25
26**6.13 ASSESSMENT SYSTEMS AND EQUIPMENT**

25

The following paragraphs identify systems and equipment to be used by the CPSES Emergency Response Organization to assess plant systems status, inplant, onsite and offsite radiological conditions, and overall safety status of the plant.

6.13.1 Safety Parameter Display System

The Safety Parameter Data System (SPDS) is designed to provide indications to detect the approach to, the existence of, and the recovery from inadequate core cooling. The SPDS also provides a minimum set of parameters from which abnormal plant operating conditions may be quickly assessed. The SPDS data is displayed in the CR, TSC, and EOF.

A detailed description of the SPDS system is given in FSAR section III.A.2.1.

6.13.2 Emergency Response Facility Computer System

See sections 6.2.8 and 6.4.8.

6.13.3 Radiation Monitoring System

The CPSES Radiation Monitoring System (RMS) is comprised of the following subsystems:

- Area Radiation Monitoring System (ARMS), which continually monitors radiation fields in various areas within the plant. The ARMS is described in Section 12.3.4 of the FSAR.

- Process Radiation Monitoring System (PRMS), which provides a means for assessing radioactivity levels in plant process and effluent streams. The PRMS is described in Section 11.5.1.2 of the FSAR.

25

The RMS data is displayed in the CR, TSC, OSC, and EOF.

6.13.4 Health Physics Instrumentation

The CPSES Radiation Protection Department maintains a supply of health physics laboratory and portable survey equipment. While this equipment is used routinely during normal station operations, it is also available to supplement the emergency response radiological monitoring equipment. FSAR Table 12.5-1 provides a listing of the health physics laboratory and portable survey equipment routinely maintained at CPSES.

6.13.5 Meteorological Measurements Program

The Meteorological Measurements Program is designed to measure the parameters needed to evaluate the dispersive characteristics of the site for both the routine operational and the hypothetical accidental releases of radionuclides to the atmosphere. The program is described in detail in Section 2.3.3 of the FSAR.

The meteorological data can be displayed in the CR, TSC, and EOF.

The National Weather Service office in Fort Worth is contacted if additional meteorological data or forecasts are required. The National Weather Service also provides back-up meteorological information during emergencies.

6.13.6 Seismic Instrumentation

Seismic instrumentation is provided within the plant so that in case of an earthquake, sufficient data is generated to permit verification of the dynamic analysis of the plant and evaluation of the safety of continued operation.

The instrumentation is described in Section 3.7B.4 of the FSAR. A schematic diagram is presented in FSAR Figure 3.7B-54.

Recorded information is available in the CR.

6.13.7 Hydrological Monitoring

Hydrological monitoring equipment installed at CPSES provides data on the water level in Squaw Creek Reservoir. Operations personnel provide this information to the Control Room. Lake level may also be determined using SSI level indication available in the Control Room

30

Based on information contained in Section 2.0 of both the CPSES FSAR and Environmental Report, which discuss low probability of a significant hydrological event occurring within the CPSES area, the requirement for accessing offsite hydrological monitoring equipment is considered unnecessary.

25

6.13.8 Process Monitor Instrumentation

FSAR Table 7.2-3 lists the principle reactor trip system instrumentation, and FSAR Table 7.5-1 summarizes main control board indications available to CR personnel.

CPSES/EP

6.13.9 Fire Detection Instrumentation

25

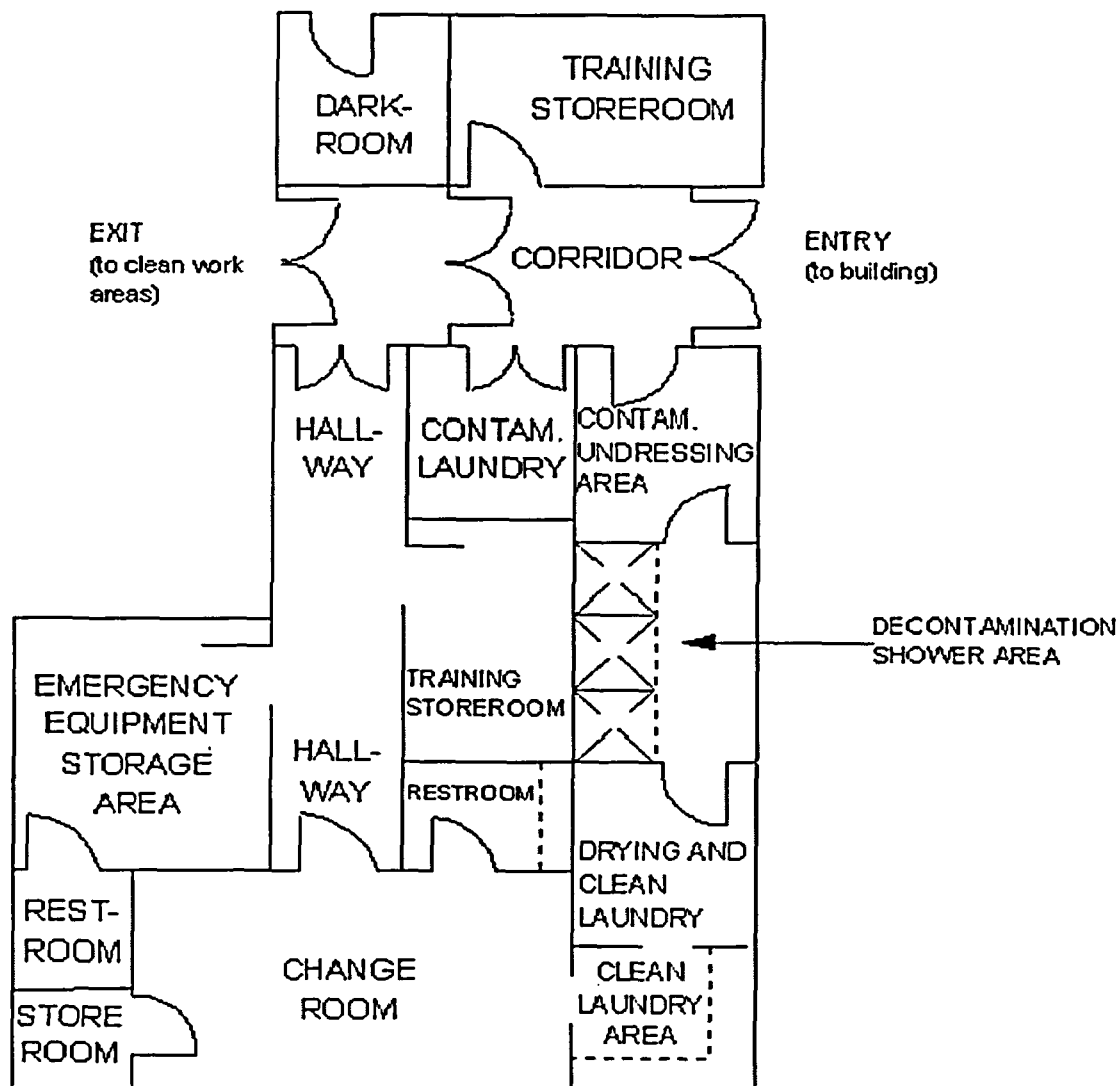
A complete description of the CPSES Fire Protection Program is provided in the CPSES FSAR, Section 9.5.1, and Fire Protection Report.

6.13.10 Environmental Radiological Monitoring Program

30

The CPSES Environmental Radiological Monitoring Program is described in the CPSES Offsite Dose Calculation Manual.

25



REVISION 26
OCTOBER 15, 1997

COMANCHE PEAK STEAM ELECTRIC STATION EMERGENCY PLAN
EMERGENCY OPERATIONS DECONTAMINATION FACILITIES IN THE NUCLEAR OPERATIONS SUPPORT FACILITY
FIGURE 6.1

7.0

ACCIDENT ASSESSMENT

Initial response to an emergency at CPSES is from the Control Room. Abnormal events observed in or near plant facilities are reported to Control Room personnel, who take appropriate actions to correct the problem. The Control Room staff has numerous assessment tools available to aid in diagnosing problems and to assist in placing the plant in a safe and stable condition.

10

Primary systems used in assessment of any radiological incident are the Digital Radiation Monitoring System (DRMS) and Emergency Response Facility Computer System (ERFCS). The DRMS and ERFCS are used by the plant operating staff to analyze steady state and dynamic behavior of plant systems and to classify the emergency. Proper assessment and classification of the emergency is important not only to accident mitigation, but also to ensure proper resources and predetermined protective measures are employed to protect plant personnel and the public. Upon recognition of an abnormal or emergency condition, plant operations personnel implement prearranged response procedures. The Control Room staff evaluates conditions and, if appropriate, classifies the emergency into one of four Emergency Classifications. To accomplish this, operational parameters and radiation monitoring instrument readings, or other symptoms indicative of system degradation would be evaluated against the Emergency Action Level criteria. These criteria are provided in the appropriate Emergency Plan Procedures. The Emergency Action Levels provided in these procedures are based on instrument readings or identified abnormal conditions which relate to the classification.

30

If core damage is suspected, appropriate procedures may be used to estimate the extent of damage. A core damage assessment procedure is provided in the Emergency Plan Procedures.

10
30

A contingency sampling plan that may be used post-accident for obtaining potentially useful information about liquids or gases inside containment has been developed and is maintained in Chemistry procedures.

The following provides a general description of the capabilities and resources available to emergency response personnel in evaluating onsite and offsite radiological conditions during an emergency.

6

7.1

COMPUTER ASSESSMENT OF RADIOLOGICAL CONDITIONS

The DRMS and ERFCS receive data from the Area Radiation Monitoring System (ARMS) and Process Radiation Monitoring System (PRMS). DRMS data provides radioactive materials source term and release rate information.

10

The ERFCS also collects and stores meteorological data. This data is used by dose assessment personnel to calculate offsite doses which are provided to the Emergency Coordinator to help formulate offsite protective action recommendations.

10

7.2 CALCULATION OF OFFSITE DOSES

A computer-based dose projection program is used to estimate the offsite consequences of a radiological release from CPSES to the surrounding public. The dose assessment program is site specific and consists of a straight-line Gaussian plume model for initial dose projections within the Plume Exposure Emergency Planning Zone (EPZ) and a separate segmented-plume model for tracking of wind shifts and plume deposition over portions of the Ingestion Exposure EPZ. This program can use system parameters from the Plant Computer System (PCS), radiation monitor instrument readings from the Radiation Monitoring System (RMS), or the results from in-plant sampling to estimate the source term and release rate. These values are then used, with meteorological parameters from the PCS, to estimate plume location and calculate projected doses to the public. If system or monitor parameters are unavailable, default or estimated information can be used to generate dose projections. Once information becomes available from the offsite survey teams, this data may be used by the software to update projected doses and plume location based on field observations.

28

The dose projection program provides terminology and concepts consistent with 10CFR20 requirements and EPA-400 guidance.

Dose projections are used by radiological assessment personnel for development of protective action recommendations, to predict plume location for dispatching and control of Offsite Field Teams, as well as estimating the dose received by persons exposed to the plume. Once field data becomes available from CPSES onsite radiological survey teams and offsite radiological monitoring teams, projected dose information is reevaluated and protective action recommendations to offsite officials are updated as required.

12

Computers are provided in the appropriate emergency facilities to enable backup means of performing dose assessment. Wall maps of the area which are used for plume tracking and field team placement are maintained in the TSC and EOF. Wall maps are not available in the Control Room, since it is not likely Control Room personnel would be directing field teams.

18

7.3 ONSITE AND OFFSITE RADIOLOGICAL CONDITIONS

6

In the event of an uncontrolled release of radioactive materials, the protection of onsite personnel shall be given as high a priority as is given for protection of the general public. A release to the environment is normally monitored by permanently installed, real-time monitoring instruments located at effluent release points. Information from these monitors will be used to predict onsite and offsite radiological conditions, thus reducing the potential for unexpected or unnecessary exposure to radiation. Radiation hazards within plant structures are also monitored by area radiation monitors which provide data regarding specific areas of the plant to the plant staff. To further aid in assessing potential onsite radiation hazards, in-plant and onsite radiological survey activities will be conducted to determine whether additional protective actions should be taken for protection of personnel remaining on site.

8

CPSES/EP

7.3.1 ONSITE RADIOLOGICAL ASSESSMENT

Initially, during an emergency condition, the on-shift Radiation Protection and Chemistry Technicians perform onsite and in-plant radiological assessment, and sampling activities, respectively, as directed by the Shift Manager.	28
Once the TSC is activated, responsibilities for onsite and offsite radiological assessment and survey activities shall be assumed by the TSC Onsite Radiological Assessment Coordinator. As CPSES Emergency Organization personnel become available, onsite radiological survey teams shall be formed as required and dispatched from the OSC. Onsite Survey Teams initially shall be composed of at least two members, at least one of which shall be a Radiation Protection technician. The Onsite Survey Team(s) perform required onsite and in-plant surveys in accordance with approved Emergency Plan Procedures.	28 8 10
Once the EOF is activated, overall responsibility for offsite radiological assessment shall be assumed by the EOF Radiation Protection Coordinator.	28
Communications between the Control Room, TSC, OSC, EOF and the Onsite Survey Team(s) shall be conducted in accordance with Section 4.0 of this plan.	8
Transportation for Onsite Survey Team(s) is provided in accordance with Emergency Plan Procedures. Based on arrival time(s) of CPSES Emergency Organization personnel, Onsite Survey Teams should be deployed within 15 to 30 minutes after arrival on site. Deployment time may vary due to duration of onsite briefing session, time required to obtain protective clothing and equipment and time required to prepare for entry into plant environs.	10 8

7.3.2 OFFSITE RADIOLOGICAL ASSESSMENT

Once the EOF is activated, the EOF Radiation Protection Coordinator assumes responsibilities for coordinating offsite radiological assessment and monitoring activities. Each Offsite Radiological Monitoring Team should be composed of at least two members, one of which shall be a Radiation Protection technician.	28 26
In the event that dose projection or onsite monitoring results indicate the potential for radioactivity release with offsite dose consequences, a Radiological Offsite Monitoring Team can be dispatched. Deployment time for the first offsite team dispatched is estimated to be within 55 to 70 minutes of an Alert or higher classification. This time includes team arrival, equipment check out and receiving a brief on expected radiological conditions.	
The EOF Radiation Protection Coordinator and his staff dispatch Offsite Radiological Monitoring Teams to preselected points in affected downwind sectors. Offsite environmental monitoring locations are identified in Plant Procedures. At preselected points, the team should perform external dose measurements, obtain air samples, determine contamination levels and obtain vegetation and liquid samples as required. From this point the team can be moved to determine the plume boundary, centerline of the plume and other factors necessary to determine impact of the release on the public and environment. This monitoring shall continue, as required, during the emergency so the need for protection measures can be quickly assessed.	12 25 10

CPSES/EP

Communications between the OSC, EOF, and Offsite Monitoring Teams shall be conducted in accordance with Section 4.0 of this plan.	12
Transportation for Offsite Radiological Monitoring Teams shall be provided in accordance with Emergency Plan Procedures. Deployment times may vary due to duration of the onsite briefing session, time required to obtain protective clothing and equipment and time to check equipment, if required.	12 10
CPSES Offsite Radiological Monitoring Teams shall be equipped with two-way radios, survey equipment, including dose rate meters and air samplers, protective clothing and other equipment needed to evaluate radiological hazards under emergency conditions. This equipment shall allow for field evaluation of air samples and detection of radioiodine concentrations as low as 1×10^{-7} uCi/cc.	12 11

8.0 PROTECTIVE RESPONSE

Protective response represents actions taken for emergency workers and the public based on the emergency classification and the resulting assessment of plant status and radiological conditions. Guidelines for the choice of protective actions are provided in this section, including methods to notify the population-at-risk of the emergency.

8.1 ONSITE PROTECTIVE ACTIONS

Onsite plant personnel and visitors are warned of an emergency at CPSES by announcements and alarms broadcast over the plant page-party system.

Personnel arriving or remaining onsite are to be notified of protective measures and shall be provided protective equipment, as necessary, depending on the actual radiological conditions existing during the emergency.

8.1.1 EVACUATION

During an emergency at CPSES, the Emergency Coordinator may choose to evacuate certain areas, buildings, or the entire site. This decision to evacuate is made by the Emergency Coordinator based on the action that presents the least risk to non-essential personnel.

During an area or building evacuation, non-essential personnel should leave the affected area or building and report to the designated assembly area. Designated assembly areas include:

- Containment Building - shield wall outside containment hatch
 - Radiation Controlled Area (RCA) - outside access control
 - Protected Area (PA) - outside the Primary and/or Alternate Access Points
- Personnel in buildings outside the Protected Area should use normal fire evacuation assembly areas.

During all evacuations, visitors are to remain with their escort until they are outside the affected area.

At a SITE AREA EMERGENCY classification or above, the Emergency Coordinator should order a site evacuation. This site evacuation includes the Exclusion Area, Squaw Creek Park, and Squaw Creek Reservoir. Should a site evacuation be ordered, non-essential personnel shall depart the site, preferably using normal site egress routes, as directed by the Emergency Coordinator. Personnel with Emergency Organization assignments shall report to their designated Emergency Response facility, unless otherwise directed.

During a site evacuation, station security personnel shall control access to the exclusion area.

8.1.2 ACCOUNTABILITY

Security is responsible for an initial accountability of all personnel within the Protected Area within approximately 30 minutes after the evacuation alarm has sounded. Security shall report results of the initial accountability and attempt to locate missing personnel as specified by plant procedures.

After initial accountability, continuous accountability should be maintained in each onsite facility.

8.1.3 MONITORING OF EVACUEES

25

During a site evacuation, if the evacuees are potentially contaminated, the Emergency Coordinator should direct evacuees to proceed for radiological monitoring at an offsite Reception Center. At this center, evacuees are logged in/out, monitored for contamination, and decontaminated if required.

8.1.4 RESPIRATORY PROTECTION

During an emergency, air sampling is performed throughout the site area to ensure protective measures are implemented in a timely manner. These protective measures may include external exposure thresholds, DAC-hr tracking, ingestion of radioprotective drugs, relocation, respiratory protective equipment, or a combination of the above. Respiratory protective equipment is available onsite for issue in accordance with Radiation Protection procedures.

8.1.5 PROTECTIVE CLOTHING

Protective clothing is available from storage areas and Radiation Protection supplies located throughout the site. This clothing is standard anti-contamination clothing and includes coveralls, hoods, gloves, and boots.

8.1.6 RADIOPROTECTIVE DRUGS

A thyroid blocking agent such as Potassium Iodide (KI), supplied at various strategic onsite and offsite locations, shall be offered to CPSES emergency response personnel in accordance with an Emergency Plan Procedure. Quantities of KI supplied at the onsite and offsite locations shall be maintained in accordance with provisions of Section 15, Appendix J. State or local government emergency plans and procedures describe KI use respective to offsite personnel.

28

8.2 OFFSITE PROTECTIVE ACTIONS

Personnel and visitors offsite, but within the owner-controlled area, are warned of an emergency by the Security Organization or by Squaw Creek Park personnel in accordance with the Squaw Creek Park Emergency Plan. Security personnel are notified of the emergency by Control Room personnel as described in Section 3.1. Squaw Creek Park personnel are notified of the emergency by the CPSES Security organization in accordance with Security procedures.

26

Protective action recommendations (PARs) are formulated during an emergency by CPSES personnel and are included in notifications to offsite authorities as specified in Section 3. These PARs are based on either existing plant conditions or projected offsite doses, and are updated as conditions warrant.

25

Offsite protective actions are then directed and implemented by State and local authorities based on the recommendations and information supplied by CPSES.

Specific protective actions to be recommended are based on the guidance of the EPA's "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents."

8.2.1 EMERGENCY PLANNING ZONES

25

Emergency Planning Zones (EPZ) have been established surrounding CPSES for planning purposes in the event of an accidental release of radioactive material from the site.

The Plume Exposure EPZ, or 10 mile EPZ, is divided into 22.5 degree sectors and concentric circles of one (1) mile increments. It is subdivided into Emergency Response Zones (ERZ), including separate zones for Granbury, Glen Rose, and Tolar.

A map of the Plume Exposure EPZ and its ERZs is contained in Section 15, Appendix F. Protective actions are recommended to State and local authorities based on the affected ERZs.

The Ingestion Exposure EPZ, or 50 mile EPZ, is divided into 22.5 degree sectors and concentric circles of ten (10) mile increments. A map of the Ingestion Exposure EPZ is contained in Section 15, Appendix G.

8.2.2 EVACUATION TIME ESTIMATES

Time estimates have been developed for evacuation of the Plume Exposure EPZ. The evacuation plan is included in the local County plans. It is the responsibility of the local authorities to execute the evacuation plan.

9.0 RADIOLOGICAL EXPOSURE CONTROL

During an emergency at CPSES, applicable Emergency Plan Procedures shall be used. These procedures specify responsibilities and actions of the Emergency Coordinator, EOF Radiation Protection Coordinator and TSC Onsite Radiological Assessment Coordinator regarding use of high range dosimeters, processing frequency of dosimetry, and criteria which allows emergency response personnel to receive radiation exposure in excess of limits set forth in 10 CFR, Part 20. Unless a lifesaving or urgent plant emergency condition requires a planned overexposure, all emergency response activities shall be performed so as not to exceed exposure limits established in 10 CFR, Part 20. Radiation Protection procedures governing frequency of dosimeter evaluation and maintenance of exposure records exist for routine operations. These procedures discuss proper use of self-reading dosimeters and establish frequency and criteria for TLD evaluation.

10
12

6

6

6

Routine TLD processing is accomplished by Radiation Protection personnel using automatic equipment linked to a records management computer. During routine operations, TLD processing equipment is normally not operated 24 hours a day; however, during emergency conditions Radiation Protection personnel shall be assigned to support 24-hour-per-day operation if required.

10
8

Use of self-reading dosimeters permits timely tracking of personnel exposures. Decisions related to planned overexposure, TLD processing and exposure extensions are based on each individual's current exposure history and self-reading dosimeter data. Personnel exposure history records are available to all emergency facility personnel.

10
6
10

9.1 EMERGENCY EXPOSURE CRITERIA

CPSES utilizes emergency exposure criteria recommended by the Environmental Protection Agency (EPA) and published in the "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents." The EPA guidelines were selected over the NCRP Report No. 39 ("Basic Radiation Protection Criteria") because of the more conservative nature of the EPA guidelines. Exposure guidelines provided in the EPA Manual shall be followed and doses to emergency response personnel shall be held to the lowest practical levels. Only the Emergency Coordinator may authorize emergency workers to receive doses in excess of 10 CFR, Part 20 limits. If time permits, the Emergency Coordinator or Radiation Protection Coordinator shall discuss rationale for exceeding 10 CFR, Part 20 limits with NRC representatives.

10

10

6

For lifesaving actions the following shall apply:

10

- a. Rescue personnel should be volunteers or professional rescue personnel.

7

CPSES/EP

b.	Rescue personnel should be familiar with consequences of exposure to radiation.	6
c.	Women capable of reproduction should not take part in these actions.	6
d.	Volunteers 45 or older, if available, should be selected.	9
e.	Planned individual emergency dose should not exceed 25 rems.	17
f.	Internal exposure should be minimized (as long as total effective dose equivalence is maintained ALARA) by using best available respiratory protection, and contamination should be controlled by use of available protective clothing.	
g.	Normally, exposure under these conditions shall be limited to once in a lifetime.	6
h.	Persons receiving exposures as indicated above should be advised to avoid procreation for a period up to a few months.	6
	For actions in less urgent emergency situations, where it is necessary to enter a hazardous area to protect facilities and equipment, eliminate further escape of effluents, or to control fires, the following shall apply:	10
a.	Persons performing planned action should be volunteers familiar with consequences of exposure to radiation and with task to be performed.	9
b.	Women capable of reproduction shall not take part in these actions.	6
c.	Planned individual emergency dose should not exceed 10 rems.	17
d.	Planned individual hands and forearms dose should not exceed 100 rems.	9
e.	Internal exposure shall be minimized (as long as total effective dose equivalence is maintained ALARA) by use of respiratory protection and contamination controlled by use of protective clothing.	17
f.	Normally, exposure under these conditions shall be limited to once in a lifetime.	6
9.2	<u>CONTAMINATION CONTROL</u>	
	Results of onsite and offsite contamination surveys, performed in accordance with approved Emergency Plan Procedures, shall be used as the basis for determining and posting radiologically controlled areas. Posting of a controlled area shall be accomplished in accordance with Radiation Protection Instructions.	10
		12

Whenever ground or surface contamination levels in unrestricted areas exceed 1,000 DPM per 100 cm ² Beta-Gamma removable within the Exclusion Area Boundary, but outside the Radiation Controlled Area, that contaminated area shall be isolated and treated as a radiation controlled area. Appropriate radiological protection and access control measures shall be implemented as described in Radiation Protection Instructions. In the event contamination levels in a radiation controlled area exceed 1000 DPM per 100 cm ² Beta-Gamma removable, decontamination or other necessary protective actions shall be considered. Return of the affected area to normal use shall be permitted when contamination levels have been reduced to unrestricted area levels.	10 12 10 8
---	---------------------

To ensure onsite personnel do not receive excess exposure via the ingestion pathway, drinking water and food supplies that have been outside the Control Room ventilation envelope and within a Radiation Controlled Area shall not be consumed without being surveyed by Radiation Protection personnel.	10
---	----

9.3 DECONTAMINATION

Decontamination shall be directed by personnel trained in radiation protection practices. Decontamination shall be performed in accordance with approved Emergency Plan Procedures and Radiation Protection Instructions. Emergency Plan Procedures prescribe that personnel decontamination is deemed necessary if contamination levels are found to be in excess of 1000 DPM per probe area (using a Ludlum Model HP-210 probe or equivalent in a low background area [<100 cpm]). Approved Emergency Plan Procedures and Radiation Protection Instructions list decontamination methods and techniques as well as actions to be taken in the event of severe skin contamination or suspected internal contamination.	10 12 11 12
--	----------------------

Decontamination facilities are available and are described in Section 6.9.	26
--	----

Decontamination of personnel, equipment and areas depends on conditions at the time. Personnel decontamination is given first priority to minimize exposures and to release individuals as soon as possible back to the work force. Equipment and areas are decontaminated as conditions permit, with priority given to equipment or areas essential to recovery activities.	8 9
--	--------

CPSES/EP

During an emergency, areas of the Station which are normally considered unrestricted access areas may become contaminated and as such shall be considered radiation controlled areas. Radiation Protection personnel should survey the Station and make changes as necessary during the course of the emergency. If the immediate area around the Station is contaminated, then a radiation controlled area access point may be established at the NOSF. The decontamination facility at the NOSF would then be used as required to decontaminate personnel leaving the Station.	9 8 8 8
--	------------------

9.4 RADIOACTIVE WASTE

Because of decontamination activities, limited amounts of radioactive waste may be generated or accumulated by the hospital, ambulance or other emergency response functions and may be brought to the NOSF Laboratory Facilities for temporary storage. As conditions permit, this radioactive waste shall be returned to the Station for processing.	12 10
--	----------

CPSES/EP

10.0	<u>MEDICAL AND PUBLIC HEALTH SUPPORT</u>	
10.1	<u>HOSPITAL AND MEDICAL SUPPORT</u>	20
	Two area hospitals are equipped and their personnel have been trained to care for contaminated injured personnel or radiological overexposure requiring medical evaluation. A third area hospital is available to handle personnel with non-contaminated injuries. Medical services beyond the capabilities of the area hospitals (e.g., expertise, specialized support, or definitive care) may be provided by other institutions depending on the circumstances of the medical/radiological emergency.	
	The area hospitals are listed in Section 15.0, Appendix H.	
10.2	<u>ONSITE FIRST AID</u>	
	A first aid station is maintained onsite and is equipped with standard supplies such as bandages, splints and stretchers. Pre-staged equipment for responders is located at the primary RCA access and Fire Brigade assembly areas. First aid kits with basic supplies are located throughout CPSES. Eyewash stations are located throughout the plant at strategic locations.	27
	Selected CPSES personnel are trained to provide basic first aid and patient preparation for onsite personnel who become injured or ill. A number of CPSES employees have also received basic first aid training and are capable of rendering first aid to injured or ill personnel. In addition, selected CPSES Emergency Response Organization personnel receive annual instruction in handling injured, contaminated individuals.	20
		28
10.3	<u>TRANSPORTATION OF INJURED TO OFFSITE FACILITIES</u>	20
	A vehicle is available to transport injured personnel to the appropriate medical facility. Agreements with local ambulance services (see Section 15 Appendix H for a list) provide assistance as needed. Any injured and contaminated individual transported from CPSES is accompanied by a Radiation Protection Technician who is equipped with communications equipment and suitable radiological monitoring equipment. Via this equipment and a telephone at the plant, or the ambulance radio, any ambulance should be able to communicate with the staff at the receiving hospital. Should care beyond the capabilities of the area hospitals be required, arrangements for transporting the individual are made contingent on the injuries and radiological conditions.	28 20

CPSES/EP

11.0 REENTRY AND RECOVERY

Once the emergency has subsided at CPSES and the situation is no longer considered a threat to onsite personnel or the general public, efforts shall be initiated to restore the affected unit(s) to full operation or place the affected unit(s) in a long-term safe shutdown condition until full operation can be resumed. The scope of these efforts depends on severity of the emergency, ranging from a simple close-out to a full-scale mobilization of personnel and resources to support a long-term recovery effort. If a recovery effort is deemed necessary, the CPSES Recovery Organization shall be established to ensure personnel and resources are properly applied to that effort.	9 6
Transition from the CPSES Emergency Organization to the CPSES Recovery Organization is dictated by severity of the emergency. Once the Emergency Coordinator has established that conditions have subsided, he and other appropriate TXU Power personnel assess the need for initiating a recovery effort. Emergency Plan Procedures describe the process by which TXU Power management decides when an event should be closed out and the CPSES Recovery Organization established. State and county emergency response organizations and the NRC shall be notified prior to initiating recovery phase.	10 32 10
If established, overall technical direction and control of the CPSES Recovery Organization is assumed by the Recovery Manager. The CPSES Recovery Organization absorbs the existing CPSES Emergency Organization. Management of all activities conducted from the EOF, as well as direction and control of the CPSES Emergency Organization, is assumed by the Recovery Manager. During the recovery phase, CPSES Emergency Organization personnel continue their functional assignments. As appropriate, the TSC or EOF Communications Coordinator ensures supporting emergency response organizations are informed of the change in Station status and of the CPSES organizational transition. Emergency Plan Procedures delineate requirements and actions to be taken for recovery phase activities, including transition to the CPSES Recovery Organization.	6 9 25 10
Recovery operations include evaluation of historical and real-time data and reports, verification of system/equipment status and alignment, selection of proper corrective action and restoration activities, and acquisition of equipment and personnel to accomplish those activities.	6 25 9
Reentry into environs of the Station by selected personnel is one of the most important sources of information available to the CPSES Recovery Organization. These activities should aid in ascertaining the resources, manpower and recovery actions necessary to restore the Station to operational status.	6

CPSES/EP

The Emergency Coordinator (or Recovery Manager) has the responsibility for authorizing initial reentry into an area previously evacuated for radiological reasons. Reentries shall be made and exposure guidelines established in accordance with criteria established in Emergency Plan Procedures. These procedures provide specific instructions and criteria for exposure control and, if necessary, a planned overexposure. All efforts shall be made to keep exposures as low as reasonably achievable (ALARA).

12
25
10
6

11.1 CPSES RECOVERY ORGANIZATION

The Recovery Organization is composed of CPSES personnel; TXU Power resources are available as necessary. Contract personnel are used as needed to expand the capabilities of TXU Power personnel. Since the magnitude of any recovery effort is dependent on the scope of the event, CPSES Recovery Organization staffing requirements are difficult to predict in advance; therefore, this plan only predesignates certain management level positions in the CPSES Recovery Organization. Managers form their respective groups as appropriate to deal with recovery.

32
10

The basic CPSES Recovery Organization is illustrated in Figure 11.1.

11.1.1 CPSES RECOVERY ORGANIZATION – FUNCTIONAL RESPONSIBILITIES

11.1.1.1 Recovery Manager

A member of senior CPSES management is designated as the Recovery Manager and is responsible for directing actions of the CPSES Recovery Organization.

25

Responsibilities and authorities assigned to the Emergency Coordinator in Section 1.0 of this plan are transferred to the Recovery Manager when the CPSES Recovery Organization is formed, thus assuring continuity of resources, communications and other activities initiated by the CPSES Emergency Organization.

6

25

11.1.1.2 Operations Support

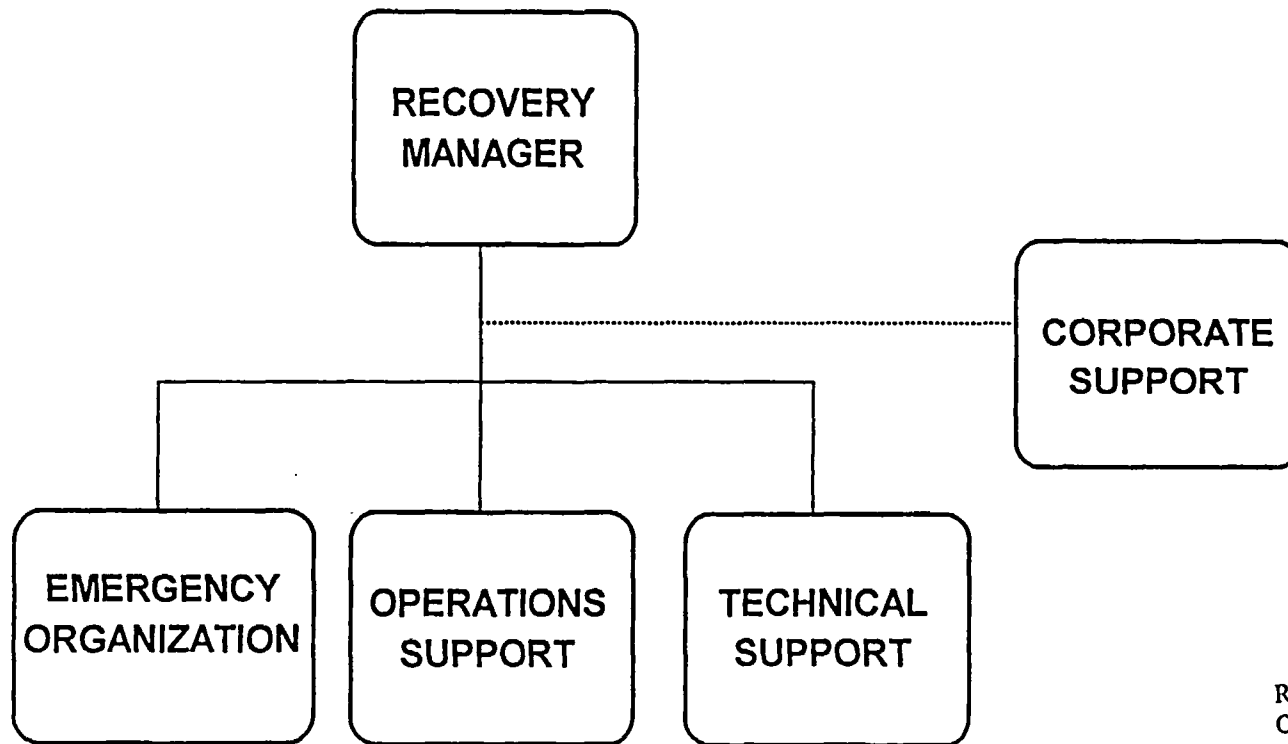
Operations Support personnel are responsible for analysis and development of plans and procedures in direct support of operations with the objective of restoring the Station to operational status. Their primary responsibilities include:

6

- a. Providing direct support to shift operations.
- b. Analyzing instrument and control problems and developing modification and repair plans.

CPSES/EP

c.	Analyzing conditions and developing guidance for shift operations personnel regarding core protection.	6
d.	Developing out-of-normal and emergency procedures for operations support.	
11.1.1.3	<u>Technical Support</u>	
	Technical Support personnel are responsible for:	6
a.	Determining need for and providing engineering and technical specialists to support other managers as required.	
b.	Assuring design activities are adequately staffed and equipped to provide timely support.	25
c.	Providing direct interface between CPSES personnel and others on administrative matters.	6
d.	Directing, coordinating and approving all engineering and design activities conducted on site during recovery.	25
e.	Developing any required modifications for radwaste systems in support of recovery operations.	6
f.	Providing technical expertise for Station repair and modification activities in support of the resolution of mechanical and electrical problems.	
g.	Providing qualified personnel to augment emergency repair and damage control teams.	
11.1.1.4	<u>Corporate Support</u>	25
	TXU Power resources and personnel are available upon request by the Recovery Manager. These resources are discussed in Section 1.2 of this plan.	32 25
11.2	<u>ESTIMATING TOTAL POPULATION EXPOSURE</u>	
	The State oversees this activity. It is conducted in accordance with procedure 22 of appendix 7 of the Texas Radiological Emergency Management Plan.	25



REVISION 25
October 1, 1996

COMANCHE PEAK STEAM ELECTRIC STATION EMERGENCY PLAN
CPSES RECOVERY ORGANIZATION
FIGURE 11.1

CPSES/EP

12.0 EXERCISES AND DRILLS

Emergency preparedness exercises are conducted to evaluate the integrated capability and a major portion of basic elements of the utility's overall emergency response. Drills are conducted to develop and maintain key skills, to evaluate segments of overall emergency response and to periodically confirm availability and operability of emergency equipment. Exercises and drills shall be conducted in accordance with NRC and FEMA rules (10 CFR, Part 50.47 and 44 CFR, Part 351) and approved Emergency Plan Procedures.

10
13
27

12.1 EXERCISES

Exercises are conducted to test adequacy of timing and content of implementing procedures and methods, emergency equipment and communication networks, and the public notification system, and ensure emergency organization personnel know their duties.

10

At least once every two (2) years, an exercise will be conducted involving full participation of local response organizations and at least partial participation of state organizations. The state fully participates with CPSES at least once every four (4) years. Other exercises (or drills) should be conducted at least annually to test integrated portions of emergency response capabilities.

25

12.2 DRILLS

Drills for testing, developing and maintaining emergency response skills are conducted periodically at CPSES. Drills are also used to evaluate emergency response personnel and allow for hands-on training. The drills should follow preplanned scenarios developed to thoroughly test response of personnel involved. During drills, if appropriate, on-the-spot correction of incorrect performance should be made and demonstration of proper performance offered by the drill controller. State personnel should periodically participate in radiological monitoring and health physics drills. The following drills are required:

9
6
10

12.2.1 COMMUNICATIONS DRILLS

Communications links between CPSES, the DPS office in Waco, and Hood County and Somervell County Emergency Operations Centers shall be tested monthly. Communications between CPSES, state and federal agencies shall be tested quarterly. Communications between CPSES, state and local Emergency Operations Centers and radiological monitoring teams shall be tested annually. Communications drills shall also address the aspect of understanding messages.

10
27

12.2.2 FIRE DRILLS

Fire drills shall be conducted in accordance with requirements of TRA-104, "Fire Protection Training." The Somervell County Volunteer Fire, Rescue, and EMS Service shall be invited to participate annually in one of the periodic drills.

10
27

12.2.3 EMERGENCY MEDICAL DRILLS

Offsite ambulance and medical support services participate in an annual drill, and may participate in conjunction with a CPSES exercise.

28
27

12.2.4 RADIOLOGICAL MONITORING DRILLS

Station personnel assigned to radiological monitoring teams shall participate in annual drills to prepare them to perform air sampling and beta-gamma exposure rate determinations within the 10-Mile Emergency Planning Zone during the Plume Exposure Pathway phase. These drills shall include provisions for communications and record keeping.

28

Station personnel assigned to radiological monitoring teams should participate in drills to collect environmental samples such as soil, water, and vegetation. These drills maintain station personnel capable to assist, if necessary, state agencies during the Ingestion Pathway phase.

12.2.5 HEALTH PHYSICS DRILLS

Health physics drills shall be conducted semi-annually and involve response to and analysis of simulated elevated airborne and liquid samples and direct radiation measurements in the environment.

6

30

12.3 DRILL AND EXERCISE SCENARIOS

Drill and exercise scenarios are developed to provide a method to test and evaluate the CPSES Emergency Preparedness Program. These scenarios are designed to allow free play in decision-making and shall include, as appropriate:

12

9

- a. Basic objective(s) of each drill and exercise, and appropriate evaluation criteria;
- b. Date(s), time period(s), location(s) and participating organizations;
- c. Simulated events;
- d. Time schedule of real and simulated initiating events;
- e. Narrative summary describing conduct of the exercise or drill which addresses simulated casualties, offsite fire department assistance, rescue of personnel, use of protective clothing, deployment of radiological monitoring teams, public information activities; and
- f. Description of arrangements for and advance materials to be provided to official observers.

6

6

The Emergency Planning Group is responsible for developing drill objectives, exercise objectives, and developing exercise scenarios. Scenarios and objectives developed for those exercises or drills requiring NRC and/or FEMA evaluation shall be approved by the Plant Manager* and submitted to the NRC and/or FEMA for review and approval.

13

27

*See FSAR Section 13.1.

12.4 CRITIQUE OF DRILLS AND EXERCISES

Drills and exercises provide the principal means for assessing effectiveness of the CPSES Emergency Plan, its implementing procedures, and the state of emergency preparedness of personnel and equipment. As soon as possible after an exercise or drill, a critique is conducted to evaluate performance and lessons learned as a result of that activity. Objectives of the critique session are to evaluate emergency response of participating personnel, to assess adequacy of dedicated emergency equipment, and to identify deficiencies in the CPSES Emergency Plan and Emergency Plan Procedures. The critique compares observed emergency response of participants with response anticipated in the drill/exercise scenario. The critique, as appropriate, includes discussion of acceptable and unacceptable emergency responses, observed deficiencies and recommended corrective actions.	10
The Emergency Planning Group is responsible for conducting exercise critiques and for preparing a written summary of each exercise critique. This summary should include objectives of the exercise, list of participants, controllers, evaluators, observers and a list of identified deficiencies. This summary shall be provided to the Emergency Planning Manager. He is responsible for ensuring appropriate changes are incorporated in the CPSES Emergency Plan and Emergency Plan Procedures.	17 10
In addition, the NRC/FEMA critique of the exercise may result in recommendations or requirements to TXU Power for improving emergency preparedness at CPSES. The Plant Manager* shall be responsible for ensuring TXU Power compliance to such requirements. The Emergency Planning Manager is responsible for incorporating appropriate changes to the CPSES Emergency Plan and Emergency Plan Procedures.	32 10
For each drill, the drill evaluator is responsible for preparing a written summary of the critique. This summary should include a list of participants, controllers, evaluators, observers and observed deficiencies. This summary shall be provided to the Emergency Planning Manager. He is responsible for ensuring appropriate changes are incorporated in the CPSES Emergency Plan and Emergency Plan Procedures.	27

*See FSAR Section 13.1.

CPSES/EP

13.0 Radiological Emergency Response Training

25

The Emergency Response Organization (ERO) training program is described in TRA-105, "Emergency Preparedness Training". Instructions for personnel who routinely visit or are assigned to the site are provided in site access training.

28

Personnel not assigned to the CPSES Emergency Response Organization receive information on reporting emergencies and expected actions in case of an emergency.

26

Personnel assigned to the CPSES Emergency Response Organization receive initial training to qualify them for their respective position. This training consists of an overview of the CPSES Emergency Plan, followed by specific position training (as applicable). Specific position training consists of:

- Accident Classification
- Dose Assessment and Projections
- Emergency Communications - Notifications
- Onsite Protective Actions
- Onsite and offsite Radiological Monitoring
- Protective Action Recommendation
- Facility/Position Walkdowns
- Medical Support

Personnel attend annual retraining to maintain their qualification.

25

Training is provided to the CPSES Fire Brigade. This training is coordinated by the Nuclear Training Manager, and addresses methods and equipment used for fighting various types of fires that could occur onsite. Appropriate emphasis is placed on radiological aspects of fire fighting.

26

Security training is conducted by the CPSES Security Department and is coordinated by the Security Manager. Training is provided to all security personnel based on each person's specific tasks. Appropriate emphasis is placed on emergency response required within radiologically controlled environments.

Training is offered to offsite emergency response organizations who may be called upon to help in an onsite emergency. Retraining is offered to the offsite emergency response organizations annually.

25

Emergency response training provides for formal critiques in order to identify areas that need correction. Formal critiques may be, but not limited to, any of the following:

- trainee exams
- self assessments
- reports (drill, exercise, and audit)
- trainee feedback

14.0 RESPONSIBILITY FOR PLANNING EFFORT

Personnel assigned to the Emergency Planning group are required to maintain proficiency in various facets of emergency preparedness. As a means of maintaining that proficiency, members may participate in activities such as drills and exercises, assist visits to other nuclear facilities, workshops and seminars, and formal training courses.	25
The Plant Manager* has overall responsibility for the emergency preparedness program and shall approve changes to the Emergency Plan. The Station Operations Review Committee (SORC) shall review changes to the Emergency Plan and submit recommended changes to the Operations Review Committee (ORC). The Emergency Planning Manager shall approve the Emergency Plan Procedures and is responsible for maintenance and coordination of the emergency preparedness program and training of the Emergency Response Organization (ERO).	27 25
Review of the Emergency Plan is on an annual basis. The review includes consideration of items identified during drills and exercises that could affect the Emergency Plan. The emergency action level procedure is reviewed annually with the State and local county governmental agencies. Review of the Emergency Plan Procedures is at least biennially. Copies of the Emergency Plan and Emergency Plan Procedures are distributed to the appropriate individuals and organizations with emergency response/planning responsibilities. These documents are controlled and changed/revised in accordance with station administrative procedures. Telephone numbers maintained for emergency response shall be reviewed and updated quarterly as necessary.	27 25
Section 15 of this plan maintains a list of the Emergency Plan Procedures with the corresponding plan section(s) and a list of organizations who provide support during an emergency. The letters of agreement with these organizations are maintained in the Emergency Planning office, and are reviewed annually.	27
An independent review of the emergency preparedness program shall be conducted at least every 24 months. An independent review shall also be conducted as necessary based on assessment by TXU Power against performance indicators or after identifying a program change occurring that potentially could adversely affect emergency preparedness. In the latter case, the review shall be conducted as soon as practical but no later than 12 months after the change occurs. Independent reviews are reported to the appropriate company management personnel and governmental organizations.	28 32 28
*See FSAR Section 13.1.	27

CPSES/EP

15.0 APPENDICES

- A. CPSES Shift Crew Chart
- B. Time/Distance/Dose (Thyroid) Curve for a LOCA Condition at CPSES
- C. Time/Distance/Dose (Whole body, Gamma) Curve for a LOCA Condition at CPSES
- D. Time/Distance/Dose (Whole body, Total) Curve for a LOCA Condition at CPSES
- E. CPSES Complex and Owner Controlled Area
- F. CPSES 0-10 miles
 - 1. Demographic Information Map
 - 2. Area Map
- G. CPSES 10-50 miles
- H. List of Letters of Agreement and Supporting Emergency Plans
- J. Emergency Equipment and Supplies
- K. List of Emergency Plan Procedures
- M. CPSES Evacuation Time Estimates and Staffing Estimates
- N. Emergency Planning Zone (EPZ) Evacuation Time Estimates
- P. Cross Index to NUREG-0654
- Q. Definitions
- R. (Removed from the CPSES Emergency Plan)
- S. Corporate Emergency Management Plan

Note: The letters "I," "L," and "O" are not used as appendix designators.

CPSES/EP

Appendix A

CPSES Shift Crew Chart

CPSES/EP

See FSAR Section 13.1.2.3 and
FSAR Table 13.1-2.

20

CPSES/EP

APPENDIX B

Time/Distance/Dose (Thyroid) Curve
for LOCA Condition at CPSES

THIS APPENDIX HAS BEEN DELETED

| 28

CPSES/EP

APPENDIX C

Time/Distance/Dose (Whole body, Gamma)

Curve for a LOCA condition at CPSES

THIS APPENDIX HAS BEEN DELETED

| 28

CPSES/EP

APPENDIX D

Time/Distance/Dose (Whole body, Total)

Curve for a LOCA condition at CPSES

THIS APPENDIX HAS BEEN DELETED

| 28

CPSES/EP

APPENDIX E

CPSES COMPLEX AND
OWNER CONTROLLED AREA

CPSES/EP

FIGURE E.1

OWNER CONTROLLED AREA & EXCLUSION AREA BOUNDARY

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES/EP

FIGURE E.2

CPSES COMPLEX

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES/EP

APPENDIX F

CPSES 0-10 Miles

1. Demographic Information Map
2. Area Map

CPSES/EP

SECTOR DESIGNATORS

Section Designators* Centerline of Sections

A	N
B	NNE
C	NE
D	ENE
E	E
F	ESE
G	SE
H	SSE
J	S
K	SSW
L	SW
M	WSW
N	W
P	WNW
Q	NW
R	NNW

- * The letters -I- and -O- have been omitted from these sector designators to eliminate confusion between letters and numbers.

CPSES/EP

POPULATION DISTRIBUTION BY SECTOR AND AREA (0 - 10 MILES)

DISTANCE FROM PLANT	ESTIMATED POPULATION DISTRIBUTION	SECTOR AND DIRECTION															
		A N	B NNE	C NE	D ENE	E E	F ESE	G SE	H SSE	J S	K SSW	L SW	M WSW	N W	P WNW	Q NW	R NNW
1 - 2 miles	I	0	0	0	0	0	3	0	0	0	3	45	12	9	3	0	0
	II	0	0	0	0	0	3	0	0	0	3	35	10	7	3	0	0
	III	0	0	0	0	0	4	0	0	0	4	53	14	14	3	0	0
2 - 3 miles	I	6	9	42	9	0	9	6	3	14	0	12	3	12	6	0	6
	II	7	10	47	6	0	7	4	3	10	0	9	3	15	7	0	6
	III	13	20	91	10	0	11	7	4	16	0	14	4	28	13	0	10
3 - 4 miles	I	23	40	20	29	26	62	26	12	3	9	9	6	20	23	0	0
	II	27	46	23	30	21	50	21	10	3	7	7	6	25	25	0	0
	III	50	87	44	51	31	74	31	14	4	11	11	10	44	47	0	0
4 - 5 miles	I	37	17	104	20	26	84	76	2260	185	51	45	3	14	31	0	20
	II	43	19	116	23	21	67	61	1801	147	41	36	3	16	35	0	23
	III	81	37	221	44	31	100	91	2686	219	61	53	4	30	67	0	44
5 - 10 miles	I	3639	1207	409	144	189	549	115	726	98	180	87	115	79	196	348	362
	II	4359	1671	464	162	150	437	92	578	78	143	70	116	90	221	395	411
	III	8263	2599	880	302	223	653	136	863	117	214	104	194	171	420	749	779

KEY:

- I BASED ON THE YEAR 1976 (ESTIMATED) POPULATION
 II BASED ON THE YEAR 1980 (ESTIMATED) POPULATION
 III BASED ON THE YEAR 2000 (ESTIMATED) POPULATION

TABLE F.1

REVISION 11
 AUGUST 31, 1989

CPSES

FIGURE F.1

**POPULATION DISTRIBUTION BY SECTOR AREA
0 TO 10 MILES**

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES

FIGURE F.2
10 MILE EMERGENCY PLANNING ZONE
(Figure not in electronic file)

[Click here to see the figure](#)

CPSES/EP

APPENDIX G

CPSES 10 - 50 Mile Map

CPSES

FIGURE G.1

**POPULATION DISTRIBUTION BY SECTOR-AREA
10 TO 50 MILES**

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES/EP

APPENDIX H

List of Letters of Agreement
and
Supporting Emergency Plans

CPSES/EP

<u>LIST OF LETTERS OF AGREEMENT</u>	25
City of Cleburne, Texas - Relocation Center	32
City of Stephenville - Relocation Center	25
City of Granbury – Joint Information Center (JIC)	26
	32
	26
	25
	26
Hood County Sheriff - Law enforcement, assist evacuation efforts, traffic control, security	28
Lake Granbury Medical Center - Treatment of contaminated injured	
Granbury/Hood County Emergency Medical Service, Inc. - Transportation of contaminated injured	30
South Texas Project Nuclear Operating Company – Backup post accident sample and analysis	32
Institute of Nuclear Power Operations (INPO) - Coordinate assistance from other utilities	28
National Weather Service - Weather forecasts	
	32
Somervell County Sheriff - Law enforcement, assist evacuation efforts, traffic control, security	28
Somervell County Volunteer Fire, Rescue, and EMS Service - Local fire fighting support	
	32
Texas Department of Health - Assistance to local government in the area of protective actions and environmental sampling	28
Texas Department of Public Safety - Law enforcement, assist evacuation efforts, traffic control, coordinates with and assists local law enforcement	
Walls Regional Hospital, Cleburne - Treatment of contaminated injured	
NOTE: This is a list of agreements referring to the concept of operations developed between Federal, State, and local agencies, and other support organizations having an emergency response role within the Emergency Planning Zones. These documents are maintained in the files of Emergency Planning.	26

CPSES/EP

LIST OF
SUPPORTING EMERGENCY RESPONSE PLANS

(1)	Hood County Emergency Management Plan and Manual of Emergency Procedures Source: County Government	26
(2)	Somervell County Emergency Management Plan and Manual of Emergency Procedures Source: County Government	26
(3)	Texas Emergency Management Plan Source: Texas Department of Public Safety	
(4)	Westinghouse Emergency Response Plan Source: Westinghouse Electric Corporation - Water Reactors Division	
(5)	Squaw Creek Park Emergency Plan Source: Squaw Creek Park	28 26
(6)	Region 4 Radiological Assistance Program Plan Source: Department of Energy	

NOTE: The supporting emergency response plans listed above are maintained at CPSES, but are not contained within the body of the CPSES Emergency Plan.

CPSES/EP

APPENDIX J

Emergency Equipment
and Supplies

EMERGENCY EQUIPMENT AND SUPPLIES

TXU Power maintains emergency response equipment and supplies in onsite and offsite facilities, cabinets, and footlockers. Onsite this equipment is staged in such places as the Control Room, Technical Support Center, Operations Support Center, Emergency Operations Facility and Nuclear Operations Support Facility (NOSF). Offsite this equipment is staged in such places as county Emergency Operations Centers (EOCs), hospitals, and Relocation Centers.

32

28

Self-Contained Breathing Apparatus (SCBAs) and spare SCBA bottles are maintained for the Control Room; SCBAs are also maintained at the NOSF.

Three company vehicles equipped to support radiological monitoring activities are available for use by Offsite Field Monitoring Teams. Three offsite field monitoring kits are located in the NOSF. The kits contain supplies and equipment represented in the listing below.

The specific type and amount of equipment and supplies in each onsite or offsite facility, location, or kit is identified on a facility inventory worksheet. The inventory worksheet is prescribed by and maintained in accordance with an Emergency Plan Procedure.

The following listing, by category, represents typical emergency response equipment and supplies maintained:

Personal Protection and Dosimetry

Coveralls, shoe covers, gloves, hoods

Thyroid Blocking drugs (Potassium Iodide [KI])

Thermoluminescent Dosimeters (TLDs), dosimeters

Radiological Monitoring

Geiger-Mueller (GM) and Ionization Chamber instruments

Air Sampler, equipped with sampler head for particulates and silver zeolite collectors

Particulate filters and Silver Zeolite cartridges

Calculators

Contamination Control

Modesty clothing, plastic bags, signs/barricades, Step-Off Pads, tape, decontamination supplies

Communications

Vehicle-installed radios, base stations, handheld radios

Miscellaneous

Portable lights, Instrument check source, clerical supplies, maps, clipboards, tweezers, etc.

CPSES/EP

APPENDIX K

LIST OF EMERGENCY PLAN PROCEDURES

CPSES/EP

LIST OF EMERGENCY PLAN PROCEDURES

<u>Procedure No.</u>	<u>Procedure Title</u>	<u>References</u>	
EPP-100	Maintaining Emergency Preparedness	3.7, 3.8, 5.0, 6.6, 6.9, 6.11, 6.13, 12.0, 13.0, 14.0, Appendix H, J	25
EPP-109	Duties and Responsibilities of the Emergency Coordinator/Recovery Manager	1.1.2.2, 11.0	25
			28
EPP-116	Emergency Repair and Damage Control and Immediate Entries	6.2	25
EPP-121	Reentry, Recovery and Closeout	11.0	
EPP-201	Assessment of Emergency Action Levels, Emergency Classification and Plan Activation	2.0, 2.1, 2.2, Table 2.1	
EPP-202	Emergency Communications Systems and Equipment	3.0, 4.0	13
EPP-203	Notifications	3.0, 4.0, Table 1.2	25
EPP-204	Activation and Operation of the Technical Support Center (TSC)	1.0, 1.1.2.2, Table 1.1 and 1.2, 6.0, 6.1	25
EPP-205	Activation and Operation of the Operations Support Center (OSC)	1.0, 1.1.2.2, Table 1.1 and 1.2, 6.0, 6.3	
EPP-206	Activation and Operation of the Emergency Operations Facility (EOF)	1.0, 1.1.2.2, Table 1.1 and 1.2, 6.0, 6.4	
EPP-207	Activation and Operation of the Joint Information Center	1.0, 1.1.2.2, Table 1.1 and 1.2, 6.0, 6.5	32
			27
			25
EPP-303	Operation of Computer Based,	6.13, 7.0	20

CPSES/EP

EPP-304	Protective Action Recommendations	8.0, 8.1, 8.2	25
EPP-305	Emergency Exposure Guidelines and Personnel Dosimetry	9.0, 9.1	
EPP-306	Use of Thyroid Blocking Agents	1.1.2.2, 8.1.6	25
EPP-309	Onsite/In-Plant Radiological Surveys and Offsite Radiological Monitoring	6.7, 7.3, 9.2, Table 1.2	
EPP-312	Core Damage Assessment	7.0	16
EPP-314	Evacuation and Accountability	4.1.8, 8.1.1, 8.1.2, 8.2.2	25
			21
TRA-105	Emergency Preparedness Training	13.0	26

CPSES/EP

APPENDIX M

CPSES EVACUATION TIME
ESTIMATES AND STAFFING
ESTIMATES

CPSES/EP

CPSES Evacuation Time Estimates

The time estimate for evacuating CPSES is projected to be 114 minutes. Justification for this time estimate is provided by the following:

10

$$T(ev) = T_d + T_n + T_m + T_t$$

Where:

$T(ev)$ = (114 minutes) Time for evacuation of 2,500 persons from the CPSES station.

10

T_d = (15 minutes) Time required for detection of accident, data analysis and decision to evacuate.

T_n = (16 minutes) Time required to notify personnel.

T_m = (15 minutes) Time required for personnel to mobilize and get under way.

10

T_t = (68 Minutes) Travel time to leave affected area (Distance: five miles) in the Manual of Protective Action Guides for Nuclear Incidents, page 1.34, a traffic lane capacity at 35 miles per hour and four persons per car is predicted to be 10,000 persons per hour. Using two traffic lanes and adjusting lane capacity stated above to a more conservative condition of 20 miles per hour and two persons per car, it is projected that travel time for 2,500 persons will be 68 minutes.

The time estimate for evacuating personnel from the Exclusion Area by boat is projected to be 85 minutes. Justification of this estimate is provided by the following:

10

$$T(ev) = T_d + T_n + T_m + T_t$$

Where:

$T(ev)$ = (85 minutes) Time estimate to evacuate individuals from Exclusion Area on SCR. A typical situation could be individuals on SCR performing environmental monitoring tasks.

10

T_d = (15 minutes) Time required for detection of accident, data analysis and decision to evacuate.

T_n = (35 minutes) Time to notify individuals to evacuate affected area. 15 minutes estimated to have boat lake-ready. 20 minutes for actual travel time.

10

T_m = (15 minutes) Time required for individuals to make ready and get under way.

T_t = (20 minutes) Travel time required to leave affected area.

CPSES/EP

CPSES Staffing Estimates

In addition to personnel on shift during an emergency, capability for increasing personnel in a timely manner is presented in Table 1.1. Response time estimates were arrived at using the following: | 25

$$T_a = T_n + T_p + T_t + T_w \quad | \quad 25$$

Where:

T_a = Time for personnel to arrive in facilities

T_n = (10 minutes) Time required to notify personnel

T_p = (10 minutes) Preparation time for personnel

T_t = Travel time to plant

T_w = (5 minutes) Walking time from parking areas to facilities | 25

The following percentages indicates where the majority of the emergency response organization lives:

15 percent of employees live in the vicinity of Glen Rose-Walnut Springs.

40 percent of employees live in Acton-Granbury-Tolar area.

45 percent of employees live in Cleburne, Stephenville and Ft. Worth area.

The range of travel times from these general areas to CPSES are:

Glen Rose-Walnut Springs - 10 to 30 minutes

Acton-Granbury-Tolar - 20 to 40 minutes

Cleburne-Stephenville-Ft. Worth - 30 to 80 minutes

From information provided by the emergency response organization, approximately 85 percent of the organization could travel to CPSES within 45 minutes under normal driving conditions. Under adverse driving conditions (the worst would be ice storms) approximately 30 minutes would be added to travel times. |

CPSES/EP

CPSES Staffing Estimates (Continued)

25

TSC and EOF Activation Times

The Technical Support Center (TSC) and Emergency Operations Facility (EOF) are manned by additional personnel responding to the emergency notification. With the majority of the emergency response organization arriving within 45 minutes travel time, activation time for both facilities would be 70 minutes. This time estimate is based on the following:

25

$$T_a = T_n + T_p + T_t + T_w$$

Where:

T_a = (70 minutes) Time for personnel to arrive in facilities

T_n = (10 minutes) Time required to notify personnel

T_p = (10 minutes) Preparation time for personnel

T_t = (45 minutes) Travel time for personnel

T_w = (5 minutes) Walking time from parking areas to facilities

If the emergency was during an ice storm, it could take up to one hour and forty minutes for approximately 85 percent of the emergency response organization to arrive in their respective facilities.

CPSES/EP

APPENDIX N

EMERGENCY PLANNING

ZONE (EPZ) EVACUATION

TIME ESTIMATES

CPSES/EP

Evacuation time estimates for 10 mile Emergency
Planning Zone around CPSES located in
Hood and Somervell Counties

(Excerpt from Attachment G of Hood and Somervell
County Manuals of Emergency Procedures)

Evacuation time estimates on Table 2:
"Summary of Results of Evacuation Time Analysis,"
are based on 1980 demographic projections.

The 1980 census for the 10-mile EPZ indicates an
actual population growth of 75 to 80 percent of these
projections; therefore, time estimates are conservative.

**TABLE 2 (APP. N, TABLE N.1)
SUMMARY OF RESULTS OF EVACUATION TIMES ANALYSIS**

AREAS	Permanent Population	Permanent Pop. Vehicles	Special Facility Population	Special Facility Vehicles *	Evacuation Capacity Per Hour	Notification Time	Preparation Time	Travel Time Normal Conditions	Travel Time Adverse Conditions	General Pop. Evac. Time Normal Conditions (Total)	General Pop. Evac. Time Adverse Conditions (Total)	Confirmation Time **	Special Pop. Evac. Time Normal Conditions	Special Pop. Evac. Time Adverse Conditions
Within Two Miles														
NE 0-2	0	0	0	0	1000 vh/hr/ln	0	0	0	0	0	0	0	0	0
SE 0-2	4	2	0	0	"	5 Min.	20	18	29	43	54	108/135	0	0
SW 0-2	64	35	0	0	"	"	20	20	32	45	57	113/143	0	0
NW 0-2	13	8	0	0	"	"	20	16	26	41	51	103/128	0	0
Within Five Miles														
NE 0-5	495	272	0	0	1000 vh/hr/ln	5 Min.	20	19	27	44	52	110/130	0	0
SE 0-5	2793	1535	1353	38/201	"	"	15	42	50	62	70	248/280	55	64
SW 0-5	430	236	450	150	"	"	20	19	31	44	56	176/224	50	60
NW 0-5	201	110	0	0	"	"	20	15	23	40	48	100/120	0	0
Within Ten Miles														
NE 0-10	8389	4609	3444	128/298	1000 vh/hr/ln	5 Min.	15	96	105	116	125	464/500	42	45
SE 0-10	4492	2468	1875	38/375	"	"	20	52	58	77	83	308/332	52	57
SW 0-10	968	532	450	150	"	"	15	26	37	46	57	184/228	50	61
NW 0-10	1589	873	0	0	"	"	20	26	33	51	58	128/145	0	0

* Upper number represents vehicles used by schools @ 20 persons per vehicle; lower number represents vehicles available to the occupants of the remaining special facilities.

** Upper number represents normal conditions; lower, adverse conditions.

**REVISION 8
APRIL 30, 1984**

CPSES

FIGURE N.3

GENERAL POPULACE

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES

FIGURE 4

EVACUATION ROUTES

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES/EP

FIGURE 6

SPECIAL FACILITIES

(Figure not in electronic file)

[Click here to see the figure](#)

CPSES/EP

APPENDIX P

Cross Index to NUREG-0654

1.0 INTRODUCTION

The attached matrix cross references specific sections of the Comanche Peak Steam Electric Station (CPSES) Emergency Plan to planning elements set forth in Revision 1 of NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."

12

2.0 OVERVIEW

The CPSES Emergency Response Organization is derived from and closely parallels the normal plant operating organization. Additional support in the event of a radiological emergency at CPSES is provided by the TXU Power corporate structure as well as local, state and federal governments. TXU Power recognizes the need to provide adequate protection to plant employees and the population-at-risk during a radiological emergency at CPSES. In order to respond to NRC/FEMA guidance (NUREG-0654), the following cross-reference guide is provided:

26

32

12

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference

NUREG-0654
Planning Standards and
Evaluation Criteria

CPSES
Emergency Plan
Revision 26

A. ASSIGNMENT OF RESPONSIBILITY

1.a	Overall Emergency Response Organization	1.1, 1.2
1.b	Concept of Operation	1.1, 1.1.2, 1.2, Table 1.1
1.c	Diagram of Organizational Inter-Relationships	Figure 1.1
1.d	Identification of Command & Control	1.1.2.2
1.e	24-hour Operation	1.1.2.1, Table 1.1
2.a	Functions and Responsibilities	N/A *
2.b	Legal Basis for Authorities	N/A
3.	Letters of Agreement	1.2, Appendix H
4.	Continuity of Operations	1.1.2.1, 1.1.2.2, Table 1.1

B. ONSITE EMERGENCY ORGANIZATION

1.	Onsite Emergency Response Organization	1.1.2.1, Table 1.1
2.	Identification of Onsite Command & Control	1.1.2.1, 1.1.2.2
3.	Line of Succession for Command & Control	1.1.2.2, Table 1.1
4.	Command and Control Functions and Responsibilities	1.1.2.2
5.	Other Functions & Responsibilities	1.1.2.1, 1.1.2.2, Table 1.1

* "N/A" indicates item not marked as applicable to licensee in NUREG-0654 Criteria Matrix.

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
6. Diagram of Organizational Interfaces	Figure 1.1
7. Onsite Staff Augmentation by Corporate Personnel	N/A
7.a Staff Augmentation by Logistical Support	1.1.2.2, Figure 1.5
7.b Staff Augmentation by Technical Support	1.1.2.2, Figure 1.3
7.c Staff Augmentation by Liaison Support	1.1.2.1, 1.2.1.2, Figure 1.1
7.d Staff Augmentation by Public Information Support	1.1.2.2, Figure 1.6
8. Identification of Contractors and Private Organization Support	1.2.3, Figure 1.1, Appendix H
9. Letters of Agreement with Local Agencies	1.2.2, Appendix H
C. <u>EMERGENCY RESPONSE SUPPORT AND RESOURCES</u>	
1.a Authorities to Request Federal Assistance	1.1.2.2, 1.2.5
1.b Requirements for Federal Assistance	1.2.5
1.c Resources Available to Support Federal Response	1.2.5
2.a State and Local Representatives Stationed at the EOF	N/A
2.b Licensee Representative Stationed at the EOC	1.1.2.2, 1.2.2
3. Identification of Radiological Laboratories	1.2.3, 1.2.4, 1.2.5, 6.7, 6.8
4. Identification of Outside Assistance	1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5, Appendix H

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
D. <u>EMERGENCY CLASSIFICATION SYSTEM</u>	
1. Emergency Classification System	2.0, 2.1, Table 2.1
2. Initiating Conditions for Emergency Action Levels	2.2, Table 2.1
3. State and Local Emergency Classification System	N/A
4. State and Local Emergency Response Implementing Procedures	N/A
E. <u>NOTIFICATION METHODS AND PROCEDURES</u>	
1. Notification of Emergency Response Organizations	3.0, 8.2.2
2. Notification of Emergency Response Personnel	3.0, 4.1.1, 4.4, 4.6
3. Content of Initial Emergency Messages	3.3
4. Content of Follow-Up Messages	3.4, 3.5, 3.6
5. Release of Information to the Public	N/A
6. Notification of the Public	3.7
7. Content of Messages to the Public	3.8, 5.0
F. <u>EMERGENCY COMMUNICATIONS</u>	
1.a 24 Hour Communications	1.1.2.1, 4.1, 4.5
1.b Communications with State & Local Governments within EPZ	4.0, 4.1.9, 4.3, Table 4.1
1.c Communications with Federal Emergency Response Organizations	4.0, 4.2, 4.3, Table 4.1
1.d Communications with the EOF, EOC and Field Teams	4.0, 4.1.2, 4.1.4, 4.1.5, 4.1.7, 4.1.9 Table 4.1

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
1.e Alert and Activation of Emergency Response Personnel	3.0, 4.0, 4.1.1, 4.4, 4.6
1.f Communications between NRC, EOF & Field Teams Assembly Area	4.0, 4.1.5, 4.2, 4.3, Table 4.1
2. Communications with Medical Support Facilities	4.0, 4.1.5, 10.3
3. Periodic Testing of Emergency Communications System	12.2.1, 12.3
G. <u>PUBLIC EDUCATION AND INFORMATION</u>	
1. Public Education Program	5.0
2. Education of the Transient Public within the EPZ	5.0
3.a Points of Contact and Accommodations for News Media	5.0, 5.1, 5.2, 6.5
3.b Designated Area for News Media in the EOF	5.1, 6.5
4.a Identification of Designated Spokesperson	1.1.2.2, Table 1.1, 5.1
4.b Exchange of Information Among Spokespersons	5.1
4.c Arrangements for Dealing with Rumors	1.1.2.2, 5.2
5. Information Programs for News Media	5.0
H. <u>EMERGENCY FACILITIES AND EQUIPMENT</u>	
1. Establishment of TSC and OSC	6.2, 6.3
2. Establishment of the EOF	6.4
3. Establishment of the EOC	N/A
4. Activation and Staffing of Emergency Response Facilities	6.2.3, 6.3.3, 6.4.3, 6.5.3

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
5.a Geophysical Phenomena Monitors	6.13.5, 6.13.6, 6.13.7
5.b Radiological Monitoring System	6.13.3
5.c Provisions for Onsite Fire & Combustion Products Detectors	6.13.9
6.a Provisions for Offsite Geophysical Phenomena Monitors	6.13.5, 6.13.7
6.b Provisions for Offsite Radiological Monitors	ODCM
6.c Laboratory Facilities	6.7, 6.8
7. Offsite Radiological Monitoring Equipment	6.11, Appendix J
8. Meteorological Instrumentation & Procedures	6.13.5
9. Operations Support Center and supplies	6.3, Appendix J
10. Emergency Equipment Maintenance	6.11
11. Identification of Emergency Equipment	Appendix J
12. Point for Sample Receipt & Analysis of Field Data & Samples	6.7, 6.8
I. <u>ACCIDENT ASSESSMENT</u>	
1. Parameters for Off-Normal Conditions and Accidents	Table 2.1, 7.0
2. Provisions for Initial and Continuing Accident Assessment	6.13.3, 7.0
3.a Provisions for Determining Source Terms of Release	7.0, 7.1

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
3.b Provisions for Determining Magnitude of Release	6.13.1, 6.13.2, 6.13.3, 6.13.10, 7.1
4. Relationship of Release to Exposure and/or Contamination	7.2
5. Access to Meteorological Information	6.13.5, 7.1
6. Methodology for Determining Release Rates and Projected Doses	7.2
7. Provisions for Field Monitoring within the Plume Exposure EPZ	Appendix J, 7.3.2
8. Provisions for Rapid Assessment of Radiological Releases	4.0, 7.0
9. Capabilities to Detect and Measure Radioiodines	6.6, 7.0, 7.3.2
10. Provisions for Relating Measured Parameters to Dose Rates	7.2,
11. Provisions for Locating & Tracking Radioactive Plume	N/A
J. <u>PROTECTIVE RESPONSE</u>	
1. Provisions for Notification of Onsite Personnel	8.1
2. Provisions for Evacuation from Site	8.1.1
3. Provisions for Radiological from Site of Evacuated Site Personnel	8.1.3
4. Provisions for Evacuating Non-Essential Onsite Personnel	8.1.1
5. Provisions for Accountability of Onsite Personnel	8.1.2

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
6.a Provisions for Onsite Use of Respiratory Protection	8.1.4
6.b Provisions for Onsite Use of Protective Clothing	8.1.5
6.c Provisions for Onsite Use of Radioprotective Drugs	8.1.6
7. Mechanism for Recommendation of Protective Actions	8.2
8. Time Estimates for Evacuation Within Plume Exposure EPZ	8.2.2, Appendices F, G, M, N
9. State & Local Capabilities for Implementing Protective Measures	N/A
10.a Maps Showing Evacuation Route Areas, & Relocation Centers, etc.	Appendices F, G, M, N
10.b Maps Showing Population Distribution	Appendices F, G, N
10.c Means for Notifying Transient and Resident Population	3.7, 5.0,
10.d Means for Protecting Individuals With Impaired Mobility	N/A
10.e Provisions for Offsite Use of Radioprotective Drugs	8.1.6
10.f Decision Making Process for Administering Radioprotective Drugs	N/A
10.g Means of Relocation	N/A
10.h Identification of Relocation Centers	N/A
10.i Projected Traffic Capacities of Evacuation Routes	N/A

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
10.j Control of Access to Evacuated Areas	N/A
10.k Contingency Measures Regarding Use of Evacuation Routes	N/A
10.l Evacuation Time Estimates for Sectors within the Plume Exposure EPZ	8.2.2
10.m Basis of Choice for Recommended Protective Actions	8.2, Appendices B, C, D, M, N
11. Protective Measures for Ingestion Pathway EPZ	N/A
12. Means for Registering & Monitoring Evacuees at Relocation Centers	N/A
K. <u>RADIOLOGICAL EXPOSURE CONTROL</u>	
1.a Onsite Exposure Guidelines for Removal of Injured Personnel	9.1
1.b Onsite Exposure Guidelines for Undertaking Corrective Actions	9.1
1.c Onsite Exposure Guidelines for Performing Assessment	9.0
1.d Onsite Exposure Guidelines for Providing First Aid	9.0
1.e Onsite Exposure Guidelines for Performing Personnel Decontamination	9.0
1.f Onsite Exposure Guidelines for Providing Ambulance Service	9.0
1.g Onsite Exposure Guidelines for Providing Medical Treatment Services	9.0
2. Onsite Radiation Protection Program	9.0, 9.1
3.a Capabilities to Determine Doses Received by Emergency Personnel	9.0

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
3.b Maintenance of Emergency Personnel Dose Records	9.0
4. Decision Making Process for Authorizing Excess Exposure	9.1
5.a Action Levels for Determining Need for Decontamination	8.1.3, 9.2, 9.3
5.b Decontamination of Emergency Personnel and Equipment	9.3, 9.4
6.a Provisions for Access Control to Onsite Contaminated Areas	9.2, 9.3
6.b Provisions for Onsite Control of Drinking Water and Foodstuffs	9.2
6.c Criteria for Permitting Return of Areas & Items to Normal Use	9.2
7. Provisions for Decontamination of Relocated Onsite Personnel	6.9, Figure 6.1, 8.1.3
<u>L. MEDICAL AND PUBLIC HEALTH SUPPORT</u>	
1. Arrangements for Local and Backup Hospital and Medical Services	10.1, Appendix H
2. Provisions for Onsite First Aid Capability	10.2, 13.0
3. Listing of Hospitals and Other Emergency Medical Services	10.1, Appendix H
4. Arrangements for Transporting Victims of Radiological Accidents	10.3, Appendix H

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
M. <u>RECOVERY AND REENTRY PLANNING AND POST ACCIDENT OPERATION</u>	
1. Plans and Procedures for Reentry and Recovery	11.0
2. Licensee Recovery Organization	11.1.1, Figure 11.1
3. Initiating of Recovery Operations	3.0, 4.0, 11.0
4. Methods for Periodically Estimating Total Population Exposure	11.2
N. <u>EXERCISES AND DRILLS</u>	
1.a General Content of Emergency Preparedness Exercises	12.0
1.b General Conduct of Emergency Preparedness Exercises	12.1
2.a Provisions for Conducting Communications Drills	12.2.1
2.b Provisions for Conducting Fire Drills	12.2.2
2.c Provisions for Conducting Medical Emergency Drills	12.2.3
2.d Provisions for Conducting Radiological Monitoring Drills	12.2.4
2.e (1) Content and Conduct of Health Physics Drills	12.2.5
2.e (2) Conduct of In-plant Liquid Sample Analysis Drills	12.2.5
3.a Objectives and Evaluation Criteria for Each Drill and Exercise	12.3
3.b Date, Time, Location and List of Participants for Each Drill & Exercise	12.3

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
3.c Summary of Simulated Events in Scenarios for Drills & Exercises	12.3
3.d Scenario Time Schedule for Drills & Exercises	12.3
3.e Summary of Conduct of Drills & Exercises	12.3
3.f Arrangements for Materials Provided to Drill/Exercise Observers	12.3
4. Provisions for Observing, Evaluating and Critiquing Exercises	12.4
5. Provisions for Implementing Corrective Actions	12.4
<u>O. RADIOLOGICAL EMERGENCY RESPONSE TRAINING</u>	
1. Provisions for Training Emergency Response Organization	13.0
1.a Provisions for Training Offsite Emergency Response Organizations	13.0
1.b Participation in Training by Offsite Emergency Response Organizations	13.0
2. Content and Conduct of Training for Onsite Emergency Organization	13.0
3. Content of Training for Onsite First Aid Teams	10.2
4.a Training Program for Emergency Response Organization Management	13.0
4.b Training Program for Accident Assessment	13.0
4.c Training Program for Field Teams and Analysis Personnel	13.0
4.d Training Program for Police, Security, and Fire Fighting Personnel	13.0

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
4.e Training Program for Reentry and Recovery Teams	13.0
4.f Training Program for First Aid and Rescue Personnel	10.2
4.g Training Program for Local Emergency Response Support Personnel	13.0
4.h Training Program for Medical Support Personnel	13.0
4.i Training Program for Licensee Headquarters Support Personnel	13.0
4.j Training Program for Personnel Communicating Information and/or Instructions	13.0
5. Provisions for Retraining Emergency Response Personnel	13.0
P. <u>PLANNING EFFORT</u>	
1. Provisions for Training Emergency Planners	14.0
2. Overall Authority and Responsibility for Emergency Planning	14.0
3. Identification of Emergency Planning Coordinator (Supervisor)	14.0
4. Provisions for Plan Maintenance	14.0
5. Provisions for Plan & Procedures Distribution	14.0
6. Listing of Supporting Plans and Sources	14.0 Appendix H
7. Appendix to Plan Listing Implementing Procedures	14.0 Appendix K
8. Plan Table of Contents and Cross-Reference Matrix	i, Appendix P

CPSES/EP

Emergency Plan/NUREG-0654 Cross Reference
(Continued)

NUREG-0654	EMERGENCY PLAN
9. Conduct of Independent Reviews	14.0
10. Provisions for Updating Telephone Lists	14.0

CPSES/EP

APPENDIX Q

Definitions

CPSES/EP

DEFINITIONS

ACCESS CONTROL POINT

A designated entry/exit point for personnel entering/exiting inplant Radiation Controlled Areas. The Access Control Point is supervised by radiation protection personnel.

ACCOUNTABILITY

The process of identifying the names of individuals in the Protected Area who are unable to contact Security after announcement of a site evacuation.

ACTIVATION

Condition where an Emergency Response Facility is staffed with the minimum personnel and capable of performing the functions defined in Table 1.1.

ADMINISTRATIVE DOSE LEVELS

Allowable dose levels imposed by TXU Power - levels less than Federal Occupation Dose Limits and less than Emergency Dose Limits.

AFFECTED POPULATION

Those individuals within the minimum affected area.

ALERT AND NOTIFICATION SYSTEM

A system of sirens and activation consoles used to alert the populace within 10 miles of CPSES to an emergency. This system is also known as the Outdoor Warning System (OWS) as well as the Siren System.

AS BUILT DRAWINGS

Drawings which provide location, configuration or design of buildings, systems and components throughout CPSES.

ASSEMBLY AREAS

Locations in and around CPSES where personnel assemble in the event of an emergency when the Emergency Coordinator calls for a building/protected area evacuation.

DECLARED EMERGENCY

Any event assigned an emergency classification.

DEDICATED (or DESIGNATED) EMERGENCY EQUIPMENT

Any items which are staged primarily for use by the Emergency Response Organization.

12
25

12

26

25

32

12

25

12

27

25

CPSES/EP

<u>EMERGENCY ACTION LEVEL</u>	12
Plant or radiological parameters which provide a basis for determining the appropriate Emergency Classification during an emergency situation.	
<u>EMERGENCY OPERATIONS CENTERS (EOCs)</u>	27
Facilities established by local governments for controlling resources in an emergency situation. (NOTE: State and local county plans define EOC as "Emergency Operating Center".)	25 27
<u>EMERGENCY RESPONSE EQUIPMENT</u>	12
Any item which is identified or made available for emergency response.	
<u>EMERGENCY OPERATIONS FACILITY (EOF)</u>	
The onsite emergency response facility from which management of the overall CPSES emergency response, including coordination with federal, state and local officials, will occur.	
<u>EMERGENCY RESPONSE ORGANIZATION (ERO)</u>	25
Personnel assigned to perform selected emergency response tasks during a declared emergency.	
<u>EMERGENCY RESPONSE ORGANIZATION ROSTER</u>	27
A listing of Emergency Response Organization personnel.	25
<u>EMERGENCY REPAIR AND DAMAGE CONTROL ACTIVITIES</u>	12
Activities required to mitigate emergency conditions.	
<u>ENGINEERING WORKBOOK</u>	25
A notebook containing various calculation tables, formulas and figures.	
<u>FRISKER</u>	12
A portable count rate instrument sensitive to low levels of radioactive contamination.	
<u>IN-PLANT</u>	
Buildings or structures, located inside the Protected Area, directly associated with plant primary, secondary, control, or fuel-handling system (e.g., the Auxiliary Building, Containment Buildings, Safeguards Buildings, Fuel Building, Control Building, and Turbine Building).	
<u>JOINT INFORMATION CENTER</u>	32
The JIC is the single point from which information regarding an emergency condition at CPSES will be disseminated to the public and news media.	

CPSES/EP

NONESSENTIAL PERSONNEL

25

Personnel in one or more of the following categories:

Employees not having emergency response organization assignments, excluding on-shift Nuclear Operations personnel.

Visitors

Contractors (excluding Security organization), unless authorized by the Emergency Coordinator.

27

Individuals involved in non-operational activities permitted by the FSAR within the Exclusion Area.

25

Squaw Creek Park patrons.

Other persons who may be in a public access area or passing through the Owner Controlled Area.

27

OFFSITE

12

All areas not covered under the definition of "onsite."

ONSITE

The land area forming the peninsula on which CPSES is sited. The western boundary of this area is the western-most evaporation pond.

OPERATIONS SUPPORT CENTER (OSC)

25

The onsite emergency response staging area where the Emergency Repair and Damage Control Group personnel assemble and are dispatched during an emergency.

27

27

PERIODIC DEFINITIONS

28

The following definitions are applicable to those plan events/tasks which occur on a regular basis:

"Monthly" means once during a calendar month;

"Quarterly" means once during a calendar quarter;

"Semi-annual" or "Semi-annually" means twice during a calendar year;

"Annual" or "Annually" means once during a calendar year.

PLANT EVACUATION ROUTES

12

Predetermined evacuation routes designated by signs located throughout the plant.

PLANT PERSONNEL

17

Personnel employed or contracted by TXU Power who are involved in the operation, construction or maintenance at CPSES.

32

	27
<u>RUMOR CONTROL</u>	25
Personnel in the NOSF dedicated to answer questions and dispel rumors from residents or media during an emergency situation.	27
<u>SHIFT MANAGER</u>	25
A member of management, holding a Senior Reactor Operator's license, in charge of Control Room functions.	27
<u>SITE EVACUATION</u>	25
Withdrawal of non-essential personnel from the Exclusion Area.	32
<u>SQUAW CREEK PARK</u>	25
A park, owned and controlled by TXU Power, that provides restricted access to Squaw Creek Reservoir.	32
	27
<u>TECHNICAL SUPPORT CENTER (TSC)</u>	25
The TSC is the onsite emergency response facility located in close proximity to the Control Room, providing plant management and technical support to Control Room personnel during an emergency.	

APPENDIX R

(REMOVED FROM CPSES
EMERGENCY PLAN)

CPSES/EP

APPENDIX S

CORPORATE EMERGENCY
MANAGEMENT PLAN

THIS APPENDIX HAS BEEN DELETED

| 13

COMANCHE PEAK STEAM ELECTRIC STATION
EMERGENCY PLAN (EP)
EFFECTIVE PAGE LISTING

BELOW IS A LEGEND FOR THE EFFECTIVE PAGE LISTINGS:

Revision 0 (FSAR Amendment 12)	Submitted to the NRC October 8, 1980
Revision 1 (FSAR Amendment 16)	Submitted to the NRC March 31, 1981
Revision 2 (FSAR Amendment 28)	Submitted to the NRC October 26, 1981
Revision 3 (FSAR Amendment 32)	Submitted to the NRC May 21, 1982
Revision 4 (FSAR Amendment 34)	Submitted to the NRC August 20, 1982
Revision 5 (FSAR Amendment 35)	Submitted to the NRC October 12, 1982
Revision 6 (FSAR Amendment 39)	Submitted to the NRC March 8, 1983
Revision 7 (FSAR Amendment 43)	Submitted to the NRC August 29, 1983
Revision 8 (FSAR Amendment 48)	Submitted to the NRC April 30, 1984
Revision 9 (FSAR Amendment 58)	Submitted to the NRC June 30, 1986
Revision 10 (TXX-88625)	Submitted to the NRC August 22, 1988
Revision 11	August 31, 1989
Revision 12	September 28, 1990
Revision 13	January 31, 1992
Revision 14	June 12, 1992
Revision 15	June 1, 1993
Revision 16	September 10, 1993
Revision 17	January 1, 1994
Revision 18	January 31, 1994
Revision 19	November 1, 1994
Revision 20	January 6, 1995
Revision 21	March 10, 1995
Revision 22	June 16, 1995
Revision 23	August 23, 1995
Revision 24	April 19, 1996
Revision 24 (ERRATA)	April 25, 1996
Revision 25	October 1, 1996
Revision 26	October 15, 1997
Revision 27	July 24, 1998
Revision 28	December 17, 1999
Revision 29	March 3, 2000
Revision 30	March 13, 2003
Revision 31	June 20, 2003
Revision 32	May 17, 2005

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
EMERGENCY PLAN

EFFECTIVE PAGE LISTING

<u>Page</u>	<u>Revision/Date</u>
Emergency Plan Title Page	32
Table of Contents	
i	28
ii	28
iii	25
iv	32
v	30
vi	25
vii	28
viii	25
ix	32
 TAB 1.0	
1-1	28
1-2	28
1-3	32
1-4	December 17, 1999
1-5	31
1-6	December 17, 1999
1-7	31
1-8	32
1-9	32
1-10	32
1-11	32
1-12	28
1-13	28
1-14	December 17, 1999
Table 1.1 pg 1	28
pg 2	31
Table 1.2	28
Figure 1.1	27
Figure 1.2	31
Figure 1.3	28
Figure 1.4	31
Figure 1.5	32
Figure 1.6	32
 TAB 2.0	
2-1	25
2-2	19
2-3	19
Table 2.1 pg 1	29
pg 2	25

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
EMERGENCY PLAN

EFFECTIVE PAGE LISTING

<u>Page</u>	<u>Revision/Date</u>
TAB 3.0	
3-1	28
3-2	30
3-3	32
TAB 4.0	
4-1	32
4-2	32
4-3	12
4-4	32
4-5	32
Table 4.1	32
Table 4.2	27
TAB 5.0	
5-1	32
TAB 6.0	
6-1	27
6-2	28
6-3	29
6-4	28
6-5	28
6-6	29
6-7	32
6-8	32
6-9	26
6-10	30
6-11	30
Figure 6.1	26
TAB 7.0	
7-1	30
7-2	28
7-3	28
7-4	12
TAB 8.0	
8-1	25
8-2	March 3, 2000
8-3	December 17, 1999

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
EMERGENCY PLAN

EFFECTIVE PAGE LISTING

<u>Page</u>	<u>Revision/Date</u>
TAB 9.0	
9-1	12
9-2	17
9-3	26
9-4	12
TAB 10.0	
10-1	28
TAB 11.0	
11-1	32
11-2	32
11-3	32
Figure 11.1	25
TAB 12.0	
12-1	28
12-2	30
12-3	32
TAB 13.0	
13-1	28
TAB 14.0	
14-1	32
TAB 15.0	
15-1	25
TAB A	
A-1	January 6, 1995
A-2	20
TAB B	
B-1	28
TAB C	
C-1	28

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
EMERGENCY PLAN

EFFECTIVE PAGE LISTING

<u>Page</u>	<u>Revision/Date</u>
TAB D	
D-1	28
TAB E	
E-1	8/8/80
Figure E.1	12
Figure E.2	12
TAB F	
F-1	8/31/89
F-2	8/8/80
Table F.1	11
Figure F.1	5
Figure F.2	11
TAB G	
G-1	8/8/80
Figure G.1	3
TAB H	
H-1	25
H-2	32
H-3	28
TAB J	
J-1	12
J-2	32
J-3	28
TAB K	
K-1	8/8/80
K-2	32
K-3	26
TAB M	
M-1	8/8/80
M-2	10
M-3	25
M-4	25

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
EMERGENCY PLAN

EFFECTIVE PAGE LISTING

<u>Page</u>	<u>Revision/Date</u>
TAB N	
N-1	8/8/80
N-2	8/8/80
Table N.1	8
Figure N.3	5
Figure N.4	5
Figure N.6	5
TAB P	
P-1	8/8/80
P-2	32
P-3	26
P-4	26
P-5	26
P-6	26
P-7	26
P-8	26
P-9	26
P-10	26
P-11	26
P-12	26
P-13	26
P-14	26
P-15	26
TAB Q	
Q-1	25
Q-2	32
Q-3	32
Q-4	32
Q-5	32
TAB R	
R-1	10
TAB S	
S-1	13
EPL Pg 1	Rev. 32, May 17, 2005
EPL Pg 2	Rev. 32, May 17, 2005
EPL Pg 3	Rev. 32, May 17, 2005
EPL Pg 4	Rev. 32, May 17, 2005
EPL Pg 5	Rev. 32, May 17, 2005
EPL Pg 6	Rev. 32, May 17, 2005