

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

PREPARATION OF EMERGENCY PLAN PROCEDURES

SAFETY-RELATED

PROCEDURE NO. EPP-101

REVISION NO. 2

SUBMITTED BY:

B. T. Lancaster
RADIATION PROTECTION ENGINEER

DATE:

8/5/82

APPROVED BY:

A. D. Jones
MANAGER, PLANT OPERATIONS

DATE:

8/26/82

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PDR ADDCK 05000445
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<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE SEP 8 1992</p>	<p style="text-align: center;">PROCEDURE NO. EPP-101</p>
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1.0 Purpose

This procedure prescribes the format in which the CPSES Emergency Plan Procedure (EPP) shall be prepared and provides guidelines regarding the scope and content of and the amount of detail to be incorporated into each procedure.

2.0 Applicability

This procedure applies only to the procedures that implement the CPSES Emergency Plan. This procedure becomes effective when issued.

3.0 Definitions

3.1 Emergency Plan Procedures - Written procedures which address or specify actions to be taken by CPSES Emergency Organization members in the event of an Emergency Condition or potential Emergency Condition.

4.0 Instructions

4.1 Each Emergency Plan Procedure shall be sufficiently detailed so as to guide designated individuals or groups during emergencies or potential emergencies. These procedures shall be written so that these individuals or groups will know in advance the expected course of events that will identify an emergency condition and the immediate actions that should be taken.

Since emergencies may not follow anticipated patterns, these procedures shall provide sufficient flexibility to accommodate variations. These procedures should include the following provisions.

4.1.1 Detailed instructions to cover step-by-step actions to be taken by designated individuals or groups for the implementation of, and subsequent use of, the EPP(s).

4.1.2 Supplemental background information will further aid designated individuals or groups for implementation of the EPP(s). This information shall be separated from the procedure actions; usually in the form of attachment to the procedure.

4.2 All Emergency Plan Procedures shall contain the following elements and be written in accordance with the format presented in Attachment 1 of this procedure.

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- 4.2.1 Title - Each Emergency Plan Procedure shall have a title page which shall contain the following information:
- 4.2.1.1 A title descriptive of the emergency task to which the procedure applies.
 - 4.2.1.2 The procedure identifying number.
 - 4.2.1.3 The procedure revision number.
 - 4.2.1.4 The submitter's signature and the date of submittal.
 - 4.2.1.5 The approver's signature and the date of approval.
- 4.2.2 Purpose - Each Emergency Plan Procedure shall contain a brief statement regarding the intent of that procedure.
- 4.2.3 Applicability - This section should state at what point in time the Emergency Plan Procedure becomes effective and designates the individuals or groups to be involved and to what extent.
- 4.2.4 Definitions - Any applicable item or condition that may clarify the procedure should be described. If there are none, the procedure shall so state.
- 4.2.5 Instructions - The guidance to initiate or complete an activity and may include precautions, immediate actions and subsequent actions as applicable. If the EPP is administrative, then paragraphs 4.2.5.1 to 4.2.5.3 may be omitted.
- 4.2.5.1 Precautions - Important steps or precautions should be noted or highlighted within the procedure.
 - 4.2.5.2 Immediate Actions - Those actions to be taken by the designated individuals or groups upon activation of the EPP(s). These actions should be written in an easy to follow step-by-step format for simplification in the execution of the procedure.
 - 4.2.5.3 Subsequent Actions - Each EPP should include subsequent actions to insure that

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the emergency task is continued as required and to further aid in the recovery to normal conditions.

4.2.6 References - References shall be listed in each EPP(s) in the order given below (as shown in Attachment 1 of this procedure).

4.2.6.1 Technical Specifications/FSAR.

4.2.6.2 Other CPSES Procedures.

4.2.6.3 Other References.

4.2.7 Attachments - This section of each EPP contains information pertinent to the accomplishment of the function or task prescribed in that procedure. This information may include applicable drawings, telephone list for EPP alert, data sheets, checkoff lists, and maps. If there are none, the procedure shall so state.

4.3 General Information

4.3.1 With the exception of the title page and the attachments, each page of an EPP shall contain the following information in the title block at the top of that page (as shown in Attachment 1 of this procedure).

4.3.1.1 Title.

4.3.1.2 Issue date.

4.3.1.3 Procedure identifying number.

4.3.1.4 Procedure revision number.

4.3.1.5 Page number as part of the entire procedure, including its attachments.

4.3.2 The attachments contained in each EPP shall contain the following information at the top of each page (as demonstrated in Attachment 1 of this procedure):

4.3.2.1 Attachment number.

4.3.2.2 Attachment page number as part of the entire attachment.

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4.3.2.3 Procedure identifying number.

4.3.2.4 Procedure revision number.

4.3.2.5 Procedure page number as part of the entire procedure, including its attachments.

4.4 The Emergency Plan Procedures shall be reviewed and controlled in accordance with procedure EPP-102 "Review, Update and Control of the Emergency Plan."

4.5 These procedures should be updated as pertinent regulations change and as needed to be compatible with the operation of CPSES.

5.0 References

5.1 CPSES Emergency Plan

5.2 STA-202, "Preparation, Review, Approval and Revision of Station Procedures"

5.3 EPP-102, "Review, Update and Control of the Emergency Plan"

6.0 Attachments

6.1 Sample format for Emergency Plan Procedure

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ATTACHMENT 1
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<p>COMANCHE PEAK STEAM ELECTRIC STATION EMERGENCY PLAN MANUAL</p>	
<p>(4.2.1.1)</p>	
<p>Procedure No. (4.2.1.2)</p>	
<p>Revision No. (4.2.1.3)</p>	
<p>SUBMITTED BY: _____</p>	<p>DATE: _____</p>
<p>APPROVED BY: _____</p>	<p>DATE: _____</p>

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(4.2.8.1.1)	REVISION NO. (4.2.8.1.4)	PAGE OF (4.2.8.1.5)
1.0 Applicability	(4.2.2)	
2.0 Conditions	(4.2.3)	
2.1		
2.2		
3.0 Immediate Actions	(4.2.4)	
3.1		
3.2		
4.0 Precautions	(4.2.5)	
5.0 Subsequent Actions	(4.2.6)	
5.1		
5.2		
6.0 References	(4.2.7)	
6.1 Technical Specifications		
6.1.1		
6.2 Other CPSES Procedures		
6.2.1		
6.3 Other References		
7.0 Attachments	(4.2.8)	

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EMERGENCY PLAN MANUAL

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REVIEW, UPDATE AND CONTROL OF
THE EMERGENCY PLAN

PROCEDURE NO. EPP-102

REVISION NO. 2

SAFETY-RELATED

SUBMITTED BY:

B.T. Lancaster
RADIATION PROTECTION ENGINEER

DATE:

6/2/82

APPROVED BY:

R.A. Jones
MANAGER, PLANT OPERATIONS

DATE:

7/6/82

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE JUL 9 1982</p>	<p style="text-align: center;">PROCEDURE NO. EPP-102</p>
<p style="text-align: center;">REVIEW, UPDATE AND CONTROL OF THE EMERGENCY PLAN</p>	<p style="text-align: center;">REVISION NO. 2</p>	<p style="text-align: center;">PAGE 2 OF 4</p>

1.0 Purpose

This procedure provides a schedule and a mechanism to review, update and control the CPSES Emergency Plan and the Emergency Plan Procedures.

2.0 Applicability

The procedure applies to the CPSES Emergency Plan and the Emergency Plan Procedures and becomes effective when issued.

3.0 Definitions

3.1 Independent Review - An audit or surveillance of the Emergency Plan, Emergency Plan Procedures and practices, training, readiness testing equipment, interfaces with state and local governments and other emergency planning functions performed by an organization whose primary function is not emergency planning for CPSES.

4.0 Instructions

4.1 Review and Revision

4.1.1 The CPSES Emergency Plan and Emergency Plan Procedures shall be reviewed annually.

4.1.1.1 Every twelve months TUGCO Quality Assurance shall perform the independent review.

4.1.2 The reviews, comments from the exercise critique and new regulations will provide a basis for revisions made to the plan and the procedures.

4.1.2.1 In accordance with procedure STA-203 "Control of Station Manuals", the procedure index shall be utilized to schedule the review of the Emergency Plan and Emergency Plan Procedures.

4.1.3 The Emergency Planning Coordinator is responsible for making revisions to the Emergency Plan and the Emergency Plan Procedures.

4.1.4 The Station Operations Review Committee (SORC) shall review the revisions to the Emergency Plan and Emergency Plan Procedures.

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4.1.4.1 The Emergency Planning Coordinator shall ensure that applicable corrective actions brought out in the audits and exercise critiques are incorporated into the plan and procedures.

4.2 Control and Distribution

4.2.1 The Emergency Plan and Emergency Plan Procedures shall be distributed to those individuals or organizations with a responsibility for implementing the plan or as authorized by the Emergency Planning Coordinator.

4.2.2 Control and Distribution of the Emergency Plan Procedures shall be in accordance with procedure STA-203, "Control of Station Manuals."

4.2.3 Control and distribution of the CPSES Emergency Plan will be in accordance with the methods used by TUSI Licensing for the CPSES FSAR.

4.2.3.1 TUSI maintains an up-to-date distribution list for the FSAR and Emergency Plan. A copy of this list is sent to the Emergency Planning Coordinator periodically and at his request.

4.2.4 The Emergency Planning Coordinator is responsible for updating the list of individuals who are to receive the Emergency Plan and/or Emergency Plan Manual.

4.2.5 The call list reference in EPP-203, "Emergency Notification and Communications shall be reviewed by the Emergency Planning Coordinator quarterly.

4.3 Records

4.3.1 Records of these annual audits and the critique sessions shall be maintained for 6 years.

5.0 References

5.1 CPSES Emergency Plan

5.2 Procedure EPP-101, "Preparation of Emergency Plan Procedures"

5.3 Procedure STA-203, "Control of Station Manuals"

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5.4 NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"

6.0 Attachments

None

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SAFETY-RELATED

NOTIFICATION OF OFFSITE OFFICIALS PENDING
FLOOD OR FAILURE OF SQUAW CREEK RESERVOIR DAM

PROCEDURE NO. EPP-105

REVISION NO. 0

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* PERSONAL INFORMATION NOT TO BE RELEASED PER 10 CFR PART 2.790 (a) (6).

SUBMITTED BY: B.T. Loventon
CHEMISTRY AND HEALTH PHYSICS ENGINEER

DATE: 3/23/81

APPROVED BY: R.A. Jones
MANAGER, PLANT OPERATIONS

DATE: 5/4/81

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE MAY 4 1981	PROCEDURE NO. EPP-105
NOTIFICATION OF OFFSITE OFFICIALS PENDING FLOOD OR FAILURE OF SQUAW CREEK RESERVOIR DAM	REVISION NO. 0	PAGE 2 OF 3

1.0 Purpose

This procedure defines the criteria to notify local and state officials in the event of flood conditions or failure of Squaw Creek Reservoir (SCR) Dam.

2.0 Applicability

This procedure describes the abnormal conditions of Squaw Creek Reservoir and SCR Dam which require notification of offsite officials. This procedure becomes effective when issued.

3.0 Definitions

None

4.0 Instructions

4.1 In order to alert the residents downstream of SCR Dam in a timely manner, the Somervell County Sheriff's office and the Department of Public Safety shall be notified by the Emergency Coordinator if any of the following conditions concerning Squaw Creek Reservoir are imminent.

4.1.1 Squaw Creek Reservoir at or over the 783.0 ft. elevation, (crest elevation of the emergency spillway).

4.1.2 Severe leaks in the SCR Dam.

4.1.3 Potential or actual failure of the SCR Dam.

4.1.4 Any other hazard concerning Squaw Creek Reservoir which may cause flooding of downstream areas that could endanger human life.

4.2 The County Sheriff's office and DPS, Waco shall be notified when the emergency situation has terminated.

4.3 These calls shall be documented.

4.4 The emergency numbers are:

4.4.2 [DPS, Waco

4.4.1 [Somervell County
Sheriff's office

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE MAY 4 1981	PROCEDURE NO. EPP-105
NOTIFICATION OF OFFSITE OFFICIALS PENDING FLOOD OR FAILURE OF SQUAW CREEK RESERVOIR DAM	REVISION NO. 0	PAGE 3 OF 3

5.0 References

5.1 SOP-902, "Squaw Creek Reservoir Return And Service Outlet System"

5.2 Brazos River Basin Squaw Creek Dam, Somervell County, Texas.
Inventory Number TX04627;
PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM

6.0 Attachments

None

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EMERGENCY NOTIFICATION AND COMMUNICATIONS

PROCEDURE NO. EPP-203

REVISION NO. 0

SAFETY-RELATED

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* PERSONAL INFORMATION NOT TO BE RELEASED PER 10 CFR PART 2.790 (a) (6).

SUBMITTED BY: B. T. Lamerstein DATE: 9/28/82
RADIATION PROTECTION ENGINEER

APPROVED BY: R. D. Jones DATE: 12/2/82
MANAGER, PLANT OPERATIONS

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE JAN 07 1983</p>	<p style="text-align: center;">PROCEDURE NO. EPP-203</p>
<p style="text-align: center;">EMERGENCY NOTIFICATION AND COMMUNICATIONS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 2 OF 18</p>

1.0 Purpose

This procedure defines specific measures for providing emergency notification, for initiating communications, for verifying proper operation of communications equipment, for verifying messages, for maintaining communication log books and close out time constraints.

2.0 Applicability

This procedure applies to all Comanche Peak Steam Electric Station (CPSES) personnel involved in emergency notification and communications and manning emergency facilities. This procedure becomes effective when issued.

3.0 Definitions

3.1 Emergency Response Facility (ERF) - The Control Room, the Technical Support Facility (TSC), the Operations Support Center (OSC) or the Emergency Operations Facility (EOF) from where notifications and communications will originate.

3.1.1 The Technical Support Center (TSC) is located in the observation area, elevation 840'6" of the Control Building, above the control room. Main functions include assessment of the accident, evaluation of possible solutions and assessment of the offsite and onsite radiological conditions.

3.1.2 The Operations Support Center (OSC) is located south of the Turbine Building at elevation 810'. The OSC shall contain emergency kits, respiratory protection equipment, auxiliary lighting, communications and first aid equipment.

3.1.3 The Emergency Operations Facility (EOF), attached to the Nuclear Operations Support Facility, is located 1.2 miles west of the station. Functions of the EOF include dose assessment, communications, decision making activities and emergency response support.

3.2 Private Automatic Branch Exchange (PABX) - The telephone system used by CPSES, directly linked to off-site phone services as provided by the Continental Telephone System of Texas.

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<p style="text-align: center;">EMERGENCY NOTIFICATION AND COMMUNICATIONS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 3 OF 18</p>
<p>4.0 <u>Instructions</u></p> <p>4.1 <u>Precautions</u></p> <p>4.1.1 All communications equipment shall be checked and proper operation verified at intervals designated in EPP-104, "Drills and Exercises".</p> <p>4.1.2 The call lists in Attachments 1, 2 and 3 are <u>examples</u>.</p> <p>4.1.2.1 The official call lists shall be posted in the Shift Supervisor's Office, the TSC, the OSC and the EOF.</p> <p>4.1.2.2 The official call lists shall be updated quarterly by the Radiation Protection Engineer or his designee.</p> <p>4.1.2.3 Records of the quarterly updates shall be maintained in accordance with STA-302, "Station Records."</p> <p>4.1.3 All incoming messages to CPSES regarding emergency conditions affecting CPSES shall be verified by requesting:</p> <p>4.1.3.1 The Callers Name</p> <p>4.1.3.2 Organization Represented</p> <p>4.1.3.3 Location</p> <p>4.1.3.4 Phone Number (including Area Code)</p> <p>4.1.4 A log of all calls involving outside organizations during any emergency involving CPSES shall be kept in a communications log book, using the communications log sheets shown in Attachment 8.</p> <p>4.2 <u>Immediate Actions</u></p> <p>4.2.1 Emergency communications shall consist of primary telephone communications and various backup systems to and from on-site and off-site response organizations that are pertinent to the mitigation of the emergency.</p> <p>4.2.2 The primary intraplant communications shall be with the PABX telephone system. Backup capabilities are provided by:</p> <p>4.2.2.1 The <u>Gai-Tronics</u> public address system</p>		

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<p>4.2.2.2 The sound powered telephone system</p> <p>4.2.2.3 The portable radio transmitter and receiver system</p> <p>4.2.3 Offsite communications shall be with the public telephone system with backup capabilities provided by:</p> <p>4.2.3.1 The two-way radio transmitter-receiver system</p> <p>4.2.3.2 Leased and direct dedicated lines</p> <p>4.2.4 Control Room personnel shall make the initial contacts with both on-site and off-site response organizations as directed by the Emergency Coordinator.</p> <p>4.2.4.1 Attachment 1 is an example call list of the organizations and personnel for Notification of Unusual Event.</p> <p>4.2.4.2 Attachment 2 is an example call list of the organizations and personnel to be notified for an Alert.</p> <p>4.2.4.3 Attachment 3 is an example call list of the organizations and personnel to be notified for a Site Area or General Emergency.</p> <p>4.2.4.4 Notification of offsite authorities shall be made within 15 minutes unless otherwise noted.</p> <p>4.2.4.5 Notification of CPSES personnel shall be as soon as possible to expedite ERF activation.</p> <p>4.2.4.6 The Control Room Shift Supervisor shall assume the duties of the Emergency Coordinator, including those of the Emergency Communications Coordinator, until relieved by the Emergency Coordinator or his designated alternate.</p> <p>4.2.4.7 The T.S.C., when activated, shall become the primary on-site Communications Center, and will relieve the Control Room Shift Supervisor of emergency communications responsibilities.</p> <p>4.2.4.8 The E.O.F., when activated, ultimately becomes the primary Communications Center, shifting responsibility from the T.S.C. to the E.O.F.</p>		

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<p>4.2.4.9. The O.S.C., when activated, shall maintain open communication with the Control Room and the T.S.C.</p> <p>4.2.5 The initial emergency message from CPSES for all emergencies shall follow the format guide in Attachment 5, "Initial Emergency Message Format"</p> <p>4.2.6 Follow up emergency messages from CPSES for all emergencies shall follow the format guide in Attachment 6, "Follow Up of Close-Out Message Format".</p> <p>4.2.7 Field teams utilizing two-way radios shall use the following techniques:</p> <p>4.2.7.1 Make sure that frequency is clear.</p> <p>4.2.7.2 Hold the radio upright with the microphone directly in front of the mouth.</p> <p>4.2.7.3 Push transmit button and wait 2 seconds for automatic radio encoding to occur.</p> <p>4.2.7.4 Begin communications per the following example: "TUGCO Base, This is Team 1. Are you Receiving?."</p> <p>4.2.7.5 Close communications per the following example: "TUGCO Base, Team 1 Clear."</p> <p>4.2.7.6 Attachment 7, "Adequate Radio Transmission Locations", is a 10-mile map depicting locations with known effective radio capabilities.</p>		
<p>4.3 <u>Subsequent Actions</u></p>		
<p>4.3.1 After terminating a message using the public telephone system, return the call using the information provided during the initial contact. Successful completion of the call-back shall be suitable verification.</p>		
<p>4.3.2 The Communications Coordinator is responsible to insure that log books are maintained and that all entries are accurate, clear, and concise. These logs, using the Communications Log Sheets in Attachment 8, shall contain, as a minimum, the following information.</p>		
<p>4.3.2.1 Person placing or receiving call.</p>		

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<p>4.3.2.2 Telephone number called or number of calling party.</p> <p>4.3.2.3 Organization contacted.</p> <p>4.3.2.4 Time and date of call.</p> <p>4.3.2.5 Content of message (a brief synopsis is sufficient).</p> <p>4.3.2.6 Was message verified (if incoming call)?</p> <p>4.3.3 Information updates to the NRC, DPS, Hood County Emergency Operations Center and Somervell County Emergency Operations Center shall be made at least every 15 minutes for an Alert or higher classification.</p> <p>4.3.4 Support organizations providing possible assistance are listed in Attachment 4, "Support Organizations".</p> <p>4.3.4.1 The Somervell County Ambulance Service and Hood General Hospital shall provide assistance for contaminated injured personnel.</p> <p>4.3.4.2 The Department of Energy (DOE) may provide offsite radiological monitoring and assessment assistance.</p> <p>4.3.4.3 Radiation Management Corporation (RMC) may provide medical support and services if needed.</p> <p>4.3.4.4 Westinghouse may provide emergency assistance in the event of an accident involving the Nuclear Steam Supply System.</p> <p>4.3.4.5 The Institute of Nuclear Power Operations (INPO) may provide expertise and personnel contacts from various nuclear utilities for all areas of plant operations.</p> <p>4.3.4.6 The National Weather Service may provide timely meteorological information.</p> <p>4.3.4.7 Gibbs & Hill, the Architect-Engineer for CPSES, may provide safety analysis and design change assistance.</p> <p>4.3.5 Unusual Events shall be closed out with a verbal summary to offsite authorities followed by a written summary within 24 hours.</p>		

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4.3.6 Alerts shall be closed out or reduced in emergency class by verbal summary to offsite authorities followed by a written summary within 8 hours of close out or class reduction.

4.3.7 Site Area and General Emergencies shall be closed out or reduced in emergency class by briefing offsite authorities at the EOF and by phone followed by a written summary within 8 hours of close out or class reduction.

5.0 References

- 5.1 CPSES - Emergency Plan, Sections 3 and 4
- 5.2 NUREG-0696, "Functional Criteria for Emergency Response Facilities, Final Report - February 1981"
- 5.3 EPP-104, "Drills and Exercises"
- 5.4 STA-302, "Station Records"

6.0 Attachments

- 6.1 Unusual Event Call List
- 6.2 Alert Call List
- 6.3 Site Area - General Emergency Call List
- 6.4 Support Organizations
- 6.5 Initial Emergency Message Format
- 6.6 Followup or Close-Out Message Format
- 6.7 Adequate Radio Transmission Locations
- 6.8 Communications Log Sheet - EPP-203-1

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ATTACHMENT 1
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UNUSUAL EVENT CALL LIST

1) ORGANIZATION TELEPHONE NUMBER DATE & TIME

NRC Emergency Notification	Hot-Line. Automatically Rings	
NRC Backup Number	[]	
Texas Department of Public Safety	Hot-Line, Automatically Rings	
Texas DPS Backup Number	[]	

2) CPSSES PERSONNEL HOME PHONE OFFICE EXT. DATE & TIME

Manager, Plant Operations:			
[Dick Jones*]	[]	[]	
Public Information Coordinator:			
[Tom Gosdin*]	[]	[]	

* For Information Only - Within 60 Minutes.

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ATTACHMENT 2
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ALERT CALL LIST

1) UNUSUAL EVENT CALL LIST (IF NOT ALREADY CONTACTED)

2) ORGANIZATION TELEPHONE NUMBER DATE & TIME

NRC Health Physics Network	Hot-Line, Automatically Rings	
American Nuclear Insurers		
Hood County EOC*		
Somervell County EOC*		

* For Information Only - Within 60 Minutes

3 CPSSES PERSONNEL - TSC STAFF HOME PHONE OFFICE EXT DATE & TIME

TSC Manager:

P - Operations Superintendent - [Ron Seidel]]
A - Operations Engineer - [John Allen]]

TSC Advisor:

P - Maintenance Superintendent - [Mike Blevins]]
A - Electrical Main. Eng. - [Charlie Scott]]
A - Mechanical Main. Eng. - [Earl Jergins]]

TSC Health Physicist:

P - Health Physicist - [Mike Williams]]
A - Health Physicist - [Scott Bradley]]
A - Sr. R.P. Technician - [Ray Fishencord]]

Engineering Team Coordinator:

P - Results Engineer - [Ed Alarcon]]
A - Reactor Engineer - [Willie Nixon]]
A - I&C Engineer - [Bill Taylor]]

Engineering Team (One from Each Discipline)

Nuclear: P - [James Hawkins]]
 A - [Jimmy Seawright]]
 A - [Larry Kostyniak]]

Mechanical: P - [George McGrath]]
 A - [Bob Browning]]
 A - [Tom Tigner]]

Electrical: P - [Jack Martin]]
 A - [Mitch Lucas]]
 A - [Martin Michalka]]

ATTACHMENT 2
PAGE 2 OF 2

ALERT CALL LIST

Operations: P - [Bobby Bird]
A - [Norman Terrel]
A - [Wayne Rosette]

4) CPSES PERSONNEL - OSC STAFF

HOME PHONE OFFICE EXT. DATE & TIME

OSC Supervisor:

P - Mechanical Main. Supervisor - [C. W. Smith]
A - Electrical Main. Supervisor - [Bill Stone]
A - Mechanical Main. Supervisor - [Ronnie Cox]
A - Electrical Main. Supervisor - [J. B. Bodine]

EMERGENCY REPAIR AND DAMAGE CONTROL GROUP:

(2 from Each Discipline)

Mechanics: P - [Bob Thornton]
P - [Dennis Sparks]
A - [Jerry Thomas]
A - [Eddie Stroud]
A - [Tim Shields]
A - [Jeff Young]

Electricians: P - [Glenn Parsons]
P - [Tom Smith]
A - [Derald Hosiner]
A - [Dennis Caughron]
A - [Paul Turner]
A - [John Hefton]

I&C: P - [Jim Buckley]
P - [Fred Martin]
A - [Jimmie Hatchett]
A - [Bill Jones]
A - [Andy Simon]
A - [Delmon Harkey]

P - Primary Contact
A - Alternate Contact

ATTACHMENT 3
PAGE 1 OF 1

SITE AREA - GENERAL EMERGENCY CALL LIST

1) ALERT CALL LIST (IF NOT ALREADY CONTACTED)

2) CPS PERSONNEL - EOF STAFF

HOME PHONE OFFICE EXT. DATE & TIME

Emergency Coordinator:

P - Manager, Plant Operations-[Dick Jones]
A - Eng. Superintendent-[Dwight Braswell]
A - Maintenance Superintendent-[Mike Blevins]

Public Information:

P - Public Information Coord.-[Tom Gosdin]
A - News Center Manager-[Mark Manroe]

Communications Coordinator:

P - Director, Nuclear Training-[C. L. Turner]
A - Training Supervisor-[Phil Tackett]

Security:

P - Security Supervisor-[John Rumsey]
A - Security Coordinator-[Andrew Scogin]
A - Security Coordinator-[Joe Ardizzoni]

Logistics:

P - Administrative Supt.-[Richard Wistrand]
A - Administrative Supervisor-[Phil Smith]

Radiation Protection Coordinator:

P - Radiation Protection Eng.-[Bobby Lancaster]
A - Chemistry & Env. Eng.-[Bob Delano]
A - Health Physicist-[Mike Williams]

Onsite Radiological Coordinator:

P - Health Physicist-[Scott Bradley]
A - Radiation Protection Tech.-[John Curtis]
A - Engineer-[Fred Herring]

Offsite Radiological Coordinator:

P - Station Chemist-[Robert Theimer]
A - Radiation Protection Tech.-[Bill Grace]
A - Radiochemist-[Sam Daniel]

P - Primary Contact

A - Alternate Contact

ATTACHMENT 4
PAGE 1 OF 2

SUPPORT ORGANIZATIONS

[Somervell County Ambulance]

Hood General Hospital
Hood County Ambulance]

Department of Energy

[Albuquerque Operations Office]
P. O. Box 5400
Albuquerque, N.M. 87115]

Radiation Management Corporation

[3508 Market Street
Philadelphia, PA 19104]

Squaw Creek Park

[Route 1, Box 66
Granbury, TX 76048]

Westinghouse Electric Corporation
Water Reactors Division

	<u>Title</u>	<u>Name</u>	<u>Office</u>	<u>Home</u>	<u>*HHL</u>
1.	Regional Service Manager	Steve Longdon			
2.	1st Alternate	John Willis			
3.	2nd Alternate	Dave Richards			
4.	Service Response Manager	Joe Leblang			
	1st Alternate	Bob Stokes			
	2nd Alternate	Lee Cunningham			
5.	Emergency Response Director	Fank Ruppel			
6.	Emergency Response Deputy Director	Ron Lehr			
7.	Emergency News	Mike Mangan			

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PAGE 2 OF 2

SUPPORT ORGANIZATIONS

* Home Hot Line (HHL). These phones are to be used only during "off" hours. Any emergencies occurring during regular office hours are to be channeled through the office phones. The emergency (HHL) phones answer 24 hours/day and are especially designated as emergency numbers. They are equipped with automatic call forwarding features in the event that no one answers. The system works in the following manner: The phone will answer requesting you to state your name (please provide the spelling if there is room for confusion), your phone number, and the nature of the problem. Please note that you must stay on the line for a minimum of fifteen (15) seconds to initiate the call forwarding. After you finish your message and hang up, the phone will then ring two (2) pre-programmed numbers, each every four (4) minutes until a phone is answered and the message given. If after leaving a message with a call forwarding device, no one has contacted you within ten (10) minutes, call the second name on the list, and, if necessary, repeat the process.

Note: Unless indicated otherwise, all phone numbers are area code 412. Where an area code other than 412 is shown, it applies to the office, home, and HHL numbers.

INPO	[1820 Water Place]	Emergency	[]
	[Atlanta, GA 30339]		[]
INPO Emergency Resources Manual			
National Weather Service	[819 Taylor]		[]
	[Fort Worth, TX]		
Gibbs & Hill	[393 Seventh Avenue]		[]
	[New York, NY 10001]	Mr. F. W. Gettler	
		V.P. - Power Engineering	

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ATTACHMENT 5
PAGE 1 OF 1

Initial Emergency Message Format

I Information for Emergency Response Organizations:

This is Comanche Peak Steam Electric Station, _____ speaking.
(individual)

An emergency affecting Unit _____ of the _____ category has been declared
(class)

at _____ . At this time, there _____ (has/has not) been a release
(time - date)

of radioactive material to the environment and there (is a/is not any) projected radiological exposure hazard to the public. (If there is an exposure hazard, give the affected map sectors, range downwind and the recommended protective actions:

Map Sectors: _____, _____, _____
Downwind Direction: _____
Protective Actions: _____

You will be kept apprised of the situation.

II News Media

Texas Utilities Generating Co. notified State and Federal officials at _____ of an _____ at Comanche Peak Steam
(time/date or day) (emergency classification)
Electric Station Unit _____ near Glen Rose, and 40 miles SW of Fort Worth, TX.
As required by the NRC this emergency was declared when: (brief description of the event)

This Unit is (continuing to operate)
(continuing to operate at reduced power)
(being shut down)
(shut down)

An _____ is _____
(emergency classification) (describe)

(General background information as needed)

(Messages may be amended, as necessary, to meet the informational needs of the incident)

ATTACHMENT 6
PAGE 2 OF 2

(b) Deteriorated

Ongoing emergency response _____
(actions)

Describe the situation at the station:

Station Condition: Operating; operating at reduced power; being shut down;
shut down.

Radiological conditions at the Station:

No release has occurred, or
Slight release has occurred, or
Major release has occurred

and No protective actions have been recommended, or
Limited protective actions have been recommended, or
Evacuation of the affected public has been recommended

Provide necessary background information as needed.

(Messages may be amended, as necessary, to meet the information needs of the
incident)

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ATTACHMENT 7
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ADEQUATE RADIO TRANSMISSION LOCATIONS

- X - VERIFIED POINTS FOR ADEQUATE TRANSMISSION
KXZ-961 Hand Held Unit

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

EMERGENCY FACILITY ACTIVATION

PROCEDURE NO. EPP-204

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY: B.T. Gonzalez DATE: 11/9/82
RADIATION PROTECTION ENGINEER

APPROVED BY: A.D. Jones DATE: 11/23/82
MANAGER, PLANT OPERATIONS

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE JAN 07 1983</p>	<p style="text-align: center;">PROCEDURE NO. EPP-204</p>
<p style="text-align: center;">EMERGENCY FACILITY ACTIVATION</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 2 OF 7</p>
<p>1.0 <u>Purpose</u></p> <p>This procedure describes the requirements and actions to be taken in the event it becomes necessary to activate the Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operations Facility (EOF).</p> <p>2.0 <u>Applicability</u></p> <p>This procedure applies to all CPSES individuals and supporting groups who will be assigned to the Technical Support Center (TSC), Operations Support Center (OSC), and the Emergency Operations Facility (EOF) in the event of an emergency situation. This procedure becomes effective when issued.</p> <p>3.0 <u>Definitions</u></p> <p>3.1 <u>Technical Support Center</u></p> <p>The Technical Support Center (TSC) is located in the observation area, elevation 840'6" of the Control Building, above the Control Room. The TSC staff, consisting of management and engineering personnel, assesses the engineering aspects of the accident, evaluates possible solutions and assesses the current offsite and onsite radiological conditions. Activation of the TSC will be initiated by the Shift Supervisor declaring that the plant is in an Alert, Site Area Emergency or General Emergency.</p> <p>Attachment 6.1 provides a floor plan of the TSC.</p> <p>3.2 <u>Operations Support Center</u></p> <p>The Operations Support Center (OSC) is located south of the Turbine Building at elevation 810' and contains emergency kits, respiratory protection equipment, auxiliary lighting, communications equipment and first aid equipment to supply the emergency response teams and expedite their efforts. Activation of the OSC will be initiated by the Shift Supervisor declaring that the plant is in an Alert, Site Area Emergency or General Emergency.</p> <p>Attachment 6.2 provides a floor plan of the OSC.</p> <p>3.3 <u>Emergency Operations Facility</u></p> <p>The Emergency Operations Facility (EOF), attached to the Nuclear Operations Support Facility (NOSF), is located 1.2 miles west of the station in an optimum meteorological sector. Decontamination facilities, a control room simulator, nuclear operations training personnel, laboratories and classrooms, a library, equipment for processing personnel monitoring devices, interactive terminals</p>		

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for the SPDS and RMS, and the news media/visitors center within the NOSF are available to the CPSES Emergency Organization. Activation of the EOF will be, but is not limited to, the declaration of a Site Area or General Emergency.

Attachment 6.3 provides a floor plan of the NOSF.

4.0 Instructions

4.1 Precautions

Each facility manager shall ensure the following before activation.

- 4.1.1 The area radiation monitors are operable.
- 4.1.2 The constant air monitors are operable.
- 4.1.3 Electrical power is available.
- 4.1.4 Communication equipment is available.

4.2 Immediate Action

4.2.1 Technical Support Center

- 4.2.1.1 Upon hearing the emergency signal, or being notified of its activation, personnel assigned duties in the TSC shall proceed there as soon as possible.
- 4.2.1.2 Each individual shall prepare their own work station.
- 4.2.1.3 The TSC Manager shall assign a Communication Coordinator to coordinate communications activities.

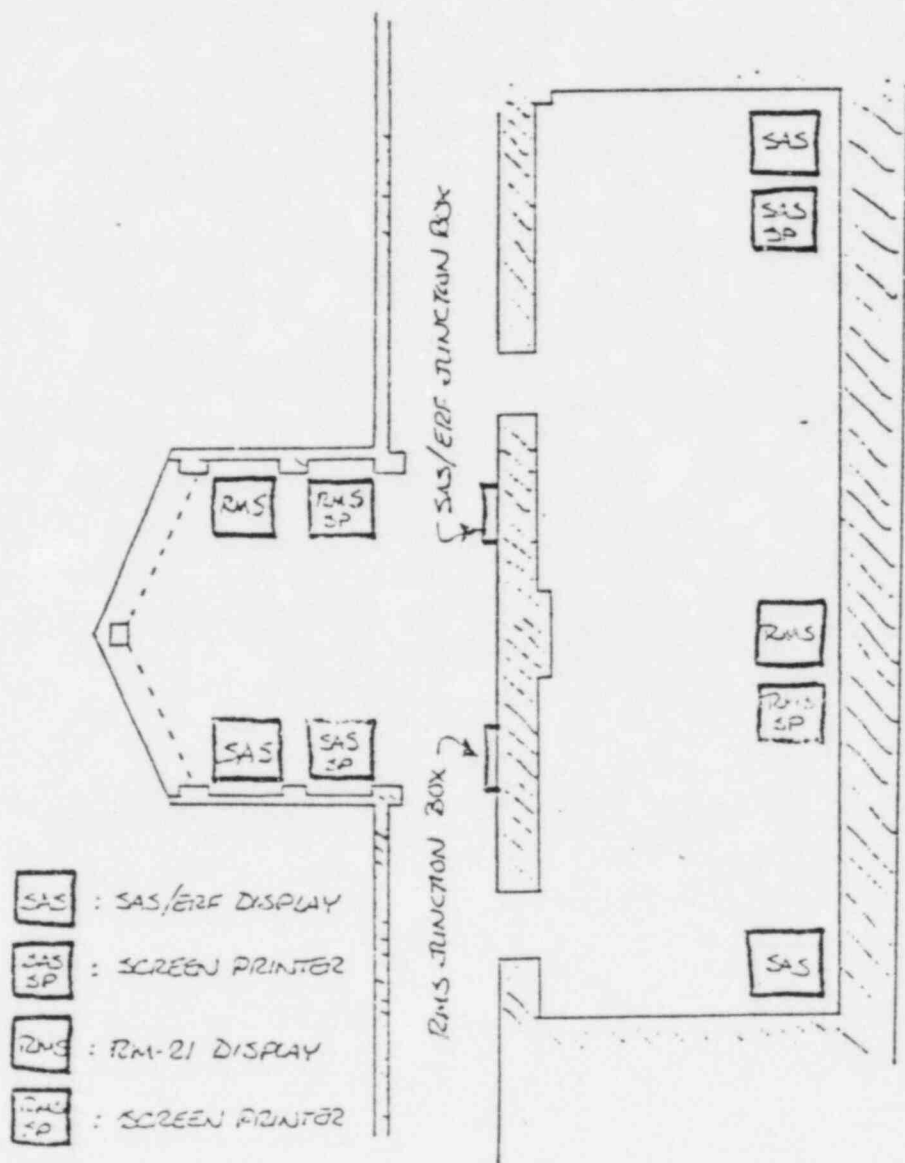
4.2.2 Operations Support Center

- 4.2.2.1 Upon hearing the emergency signal, or being notified of its activation, Emergency Repair and Damage Control Group personnel shall report to the OSC as soon as possible.
- 4.2.2.2 The OSC Supervisor shall initiate communications with the Emergency Coordinator and inform him of the OSC status.

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<p style="text-align: center;">EMERGENCY FACILITY ACTIVATION</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 4 OF 7</p>
<p style="margin-left: 40px;">4.2.3 <u>Emergency Operations Facility</u></p> <p style="margin-left: 80px;">4.2.3.1 To activate the EOF, the Communications Coordinator shall first notify the offsite authorities that the EOF is to be activated.</p> <p style="margin-left: 80px;">4.2.3.2 Each individual shall prepare their own work station.</p> <p style="margin-left: 20px;">4.3 <u>Subsequent Actions</u></p> <p style="margin-left: 40px;">4.3.1 Each facility will be considered activated when the following conditions are satisfied:</p> <p style="margin-left: 80px;">4.3.1.1 The arrival of the facility manager.</p> <p style="margin-left: 80px;">4.3.1.2 The arrival of adequate personnel, in the facility manager's opinion, to respond to the emergency.</p> <p style="margin-left: 80px;">4.3.1.3 All personnel have been briefed on the emergency.</p> <p style="margin-left: 40px;">4.3.2 Each facility manager shall designate communicators to maintain communication with personnel in other facilities.</p> <p style="margin-left: 40px;">4.3.3 The Emergency Coordinator shall notify the Public Information Coordinator of the nature of the emergency and determine a schedule for news releases.</p> <p style="margin-left: 20px;">5.0 <u>References</u></p> <p style="margin-left: 40px;">5.1 CPSES Emergency Plan, Section 6.0</p> <p style="margin-left: 40px;">5.2 EPP-203, "Emergency Notification and Communications"</p> <p style="margin-left: 20px;">6.0 <u>Attachments</u></p> <p style="margin-left: 40px;">6.1 Floor Plan of the Technical Support Center</p> <p style="margin-left: 40px;">6.2 Floor Plan of the Operations Support Center</p> <p style="margin-left: 40px;">6.3 Floor Plan of the Nuclear Operations Support Facility</p>		

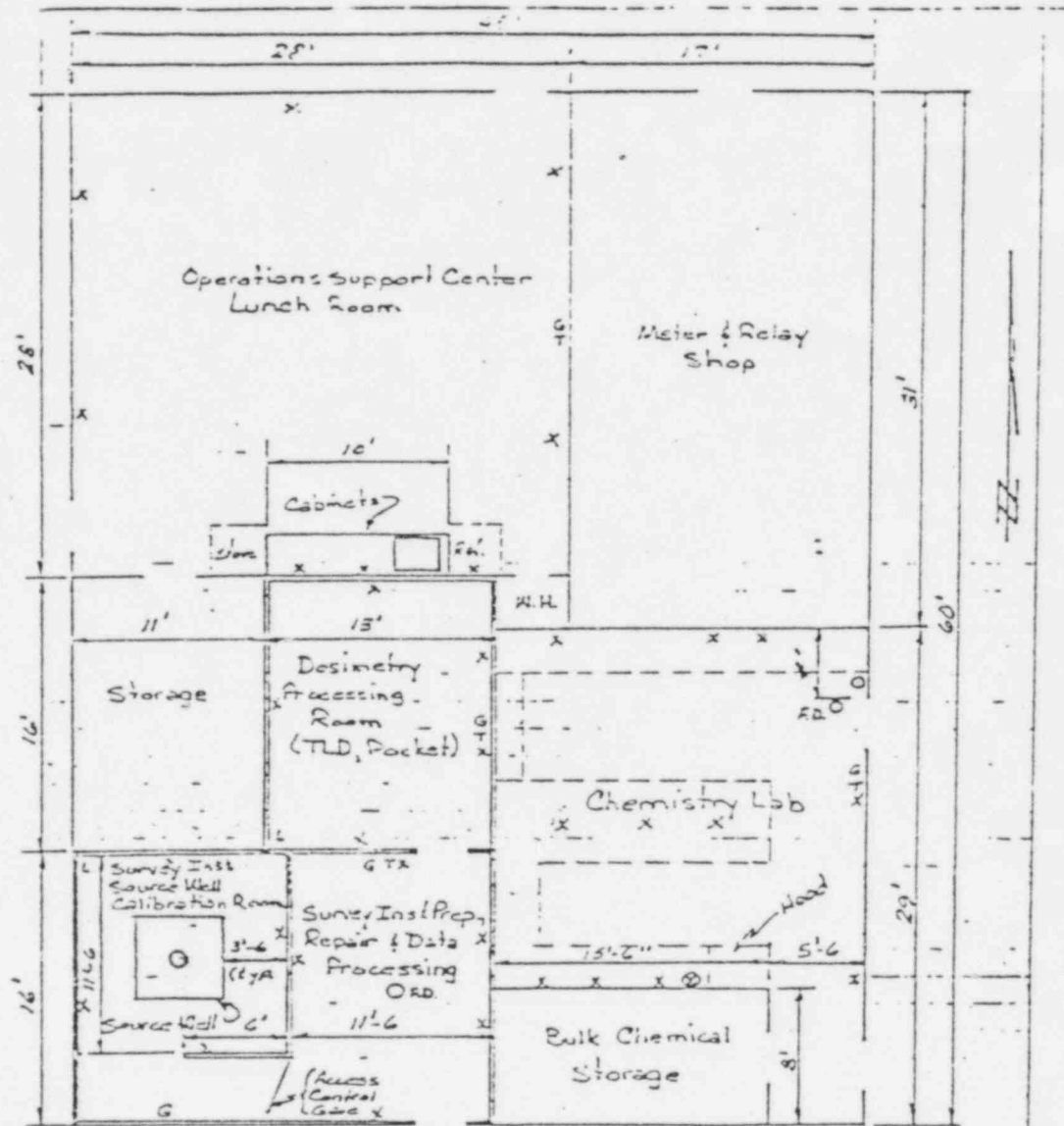
ATTACHMENT 1
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TECHNICAL SUPPORT CENTER



ATTACHMENT 2
PAGE 1 OF 1

OPERATIONS SUPPORT CENTER



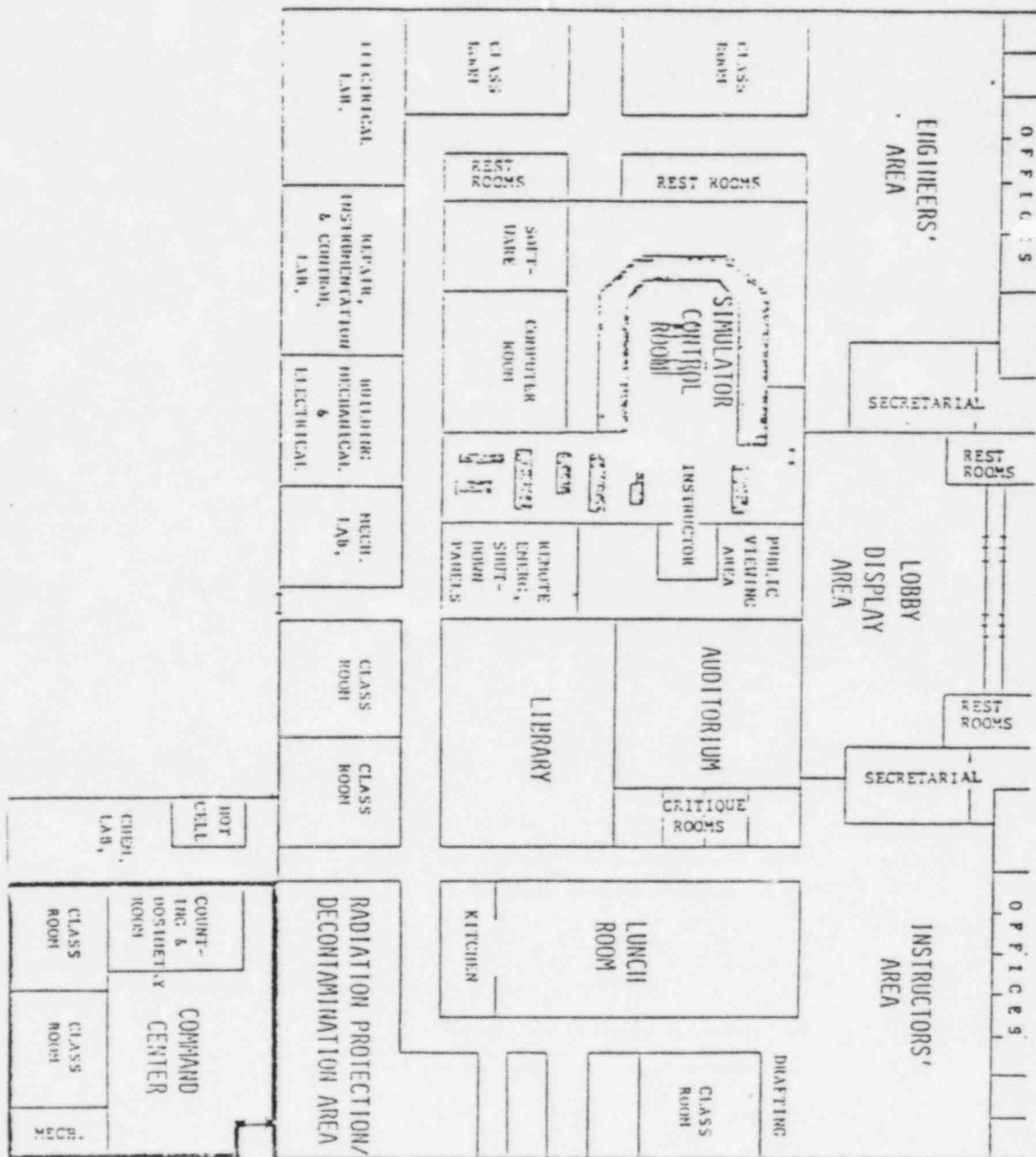
Legend:

- T - Telephone
- G - Gaillronics in-plant communication
- x - 110v electrical outlet
- L - DC Powered Emergency Lighting
- O - Eye Wash & Emergency Shower
- na - Concrete Part wall
- FD - Floor Drain
- ⊙ - 220v electrical outlet

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ATTACHMENT 3
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NUCLEAR OPERATIONS SUPPORT FACILITY



COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

CONTROL OF SITE ACCESS

PROCEDURE NO. EPP-208

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY: B.T. Pennington DATE: 10/15/82
RADIATION PROTECTION ENGINEER

APPROVED BY: J.P. Jones DATE: 12/30/82
MANAGER, PLANT OPERATIONS

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE JAN 07 1983</p>	<p style="text-align: center;">PROCEDURE NO. EPP-208</p>
<p style="text-align: center;">CONTROL OF SITE ACCESS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 2 OF 4</p>

1.0 Purpose

The purpose of this procedure is to establish the criteria for controlling access to the CPSES site and emergency response facilities.

2.0 Applicability

This procedure is applicable to CPSES Security and selected plant management personnel during emergencies of the Alert class or higher. This procedure becomes effective when issued.

3.0 Definitions

3.1 Emergency Action Level (EAL) - A classification system of emergency severity based on operational, radiological and meteorological conditions at or near the plant site.

3.2 Notification of Unusual Event - Unusual events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected for this classification unless further degradation of the safety systems occur.

3.3 Alert - Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the Environmental Protection Agency (EPA) Protective Action Guideline exposure levels. It is the lowest level of classification where near-site or offsite emergency response may be anticipated. For most Alert events, the plant would be brought to a safe condition, and radioactive releases, if any, would be minimal.

3.4 Site Area Emergency - Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. The Site Area Emergency classification reflects conditions where some significant releases of radioactive material are likely, or they are occurring, but where a core meltdown situation is not indicated based on current information. Any releases are not expected to exceed EPA Protective Action Guideline exposure levels except near the site boundary.

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE JAN 07 1983</p>	<p style="text-align: center;">PROCEDURE NO. EPP-208</p>
<p style="text-align: center;">CONTROL OF SITE ACCESS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 3 OF 4</p>
<p>3.5 <u>General Emergency</u> - The General Emergency classification reflects accident situations involving actual or imminent substantial core degradation or melting with the potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.</p> <p>3.6 <u>Emergency Response Facility</u> - The Control Room, the Technical Support Center, the Operations Support Center and the Emergency Operations Facility from which emergency activities are directed.</p> <p>3.7 <u>Frisker</u> - A portable count rate instrument sensitive to low levels of radioactive contamination.</p> <p>4.0 <u>Instructions</u></p> <p>4.1 <u>Precautions</u></p> <p>4.1.1 Only the Emergency Coordinator or the Recovery Manager shall authorize access to the CPSES site under emergency conditions.</p> <p>4.1.2 Security personnel shall deny access to the CPSES site by any unidentified or unauthorized personnel.</p> <p>4.1.3 Normal access control points and procedures shall be employed unless conditions or directions from the Emergency Coordinator dictate otherwise.</p> <p>4.2 <u>Immediate Actions</u></p> <p>4.2.1 The Emergency Coordinator shall ensure that Security is informed of the pending arrival of emergency response vehicles, personnel or services.</p> <p>4.2.2 Security shall activate SEC-610, "Security Response During Operating Emergencies."</p> <p>4.2.3 <u>Emergency Response Facilities</u></p> <p>4.2.3.1 Each ERF Manager has absolute access control over his ERF.</p>		

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<p style="text-align: center;">CONTROL OF SITE ACCESS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 4 OF 4</p>
<p style="margin-left: 40px;">4.2.3.2 Security shall establish and maintain security posts in accordance with security procedures, at the entrance to the following facilities:</p> <p style="margin-left: 80px;">4.2.3.2.1 Control Room</p> <p style="margin-left: 80px;">4.2.3.2.2 Technical Support Center</p> <p style="margin-left: 80px;">4.2.3.2.3 Nuclear Operations Support Facility</p> <p style="margin-left: 80px;">4.2.3.2.4 Emergency Operations Facility (for Site Area or General Emergency)</p> <p style="margin-left: 80px;">4.2.3.2.5 Other locations deemed necessary by the Emergency Coordinator.</p> <p style="margin-left: 40px;">4.2.3.3 Security functions at all ERF locations are:</p> <p style="margin-left: 80px;">4.2.3.3.1 Deny or permit access, contingent on instructions from the ERF Manager.</p> <p style="margin-left: 80px;">4.2.3.3.2 Maintain a current log of personnel within each ERF.</p> <p style="margin-left: 80px;">4.2.3.3.3 Direct personnel entering any ERF to monitor themselves with a frisker to ensure they are not contaminated.</p> <p style="margin-left: 20px;">4.3 Subsequent Actions</p> <p style="margin-left: 60px;">4.3.1 These Security measures shall continue until instructions to the contrary are given by the Emergency Coordinator or the Recovery Manager.</p> <p style="margin-left: 20px;">5.0 <u>References</u></p> <p style="margin-left: 60px;">5.1 CPSES Emergency Plan, Section 8.0</p> <p style="margin-left: 60px;">5.2 SEC-610, "Security Response During Operating Emergencies"</p> <p style="margin-left: 20px;">6.0 <u>Attachments</u></p> <p style="margin-left: 60px;">None</p>		

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

EVACUATION

PROCEDURE NO. EPP-210

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY:

B.T. Lucente
RADIATION PROTECTION ENGINEER

DATE:

9/23/82

APPROVED BY:

R. Jones
MANAGER, PLANT OPERATIONS

DATE:

10/21/82

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE 077 2 1 1972	PROCEDURE NO. EPP-210
EVACUATION	REVISION NO. 0	PAGE 2 OF 10

1.0 Purpose

This procedure provides guideline information pertinent to the evacuation of onsite personnel, including TUGCO and contractor personnel, and visitors.

2.0 Applicability

This procedure affects all personnel within the confines of CPSES and becomes effective when issued.

3.0 Definitions

- 3.1 Station Evacuation - (Local Evacuation): The evacuation of specific areas or buildings due to an incident affecting those areas. This evacuation may not affect all personnel and may be prompted by an Unusual Event or Alert class emergency.
- 3.2 Site evacuation - The evacuation of all visitors, construction personnel, station personnel, and Squaw Creek Park visitors, except those required to put the station into a safe shutdown mode. A site evacuation may be announced if a Site Area emergency is declared and will be required if a General emergency is declared.
- 3.3 Visitors - Any personnel requiring an escort and whose safety and conduct are the responsibility of that escort.
- 3.4 Assembly Areas - Locations in and around the station where personnel shall congregate in the event of an emergency.
- 3.5 Restricted Area - Any area to which access is controlled for the purposes of radiation protection. Any area where an individual could receive a dose in excess of 2 millirem during any one hour period.
- 3.6 Protected Area - An area encompassed by physical barriers and to which access is controlled.

4.0 Instructions

4.1 General

4.1.1 Assembly areas for station building evacuation are:

- 4.1.1.1 Hallway located outside the personnel hatch for containment personnel.

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<p>4.1.1.2 Restricted access area point for restricted areas for auxiliary building, fuel building and safeguards building personnel.</p> <p>4.1.1.3 Administration Building Parking Lot for the administration personnel and individuals inside protected area and outside the restricted area.</p> <p>4.1.1.4 Brown & Root Parking Lot for construction personnel per Brown & Root procedures.</p> <p>4.1.2 Assembly areas for a Site Evacuation are:</p> <p>4.1.2.1 The Emergency Operations Facility (EOF) for plant personnel, warehouse personnel, TUGCO visitors, and TUGCO contractors.</p> <p>4.1.2.2 Brown & Root Employment Office for B&R construction personnel, their visitors, and B&R warehouse personnel.</p> <p>4.1.3 Assembly areas for a fire or other non-radiological emergency alert:</p> <p>4.1.3.1 Access points for TUGCO personnel.</p> <p>4.1.3.2 Brown & Root Parking Lot for construction personnel.</p> <p>4.1.3.3 Administration Building Parking Lot for Administrative and TUGCO warehouse personnel.</p> <p>4.1.3.4 EOF Parking Lot for the Emergency Operations Facility personnel.</p> <p>4.1.4 Squaw Creek Park and reservoir are also affected by site evacuation. Squaw Creek Park, Inc. (SCPI) operates the park and is responsible for accountability and evacuation of the people in the park and on the reservoir.</p> <p>In the event of an evacuation due to a Site Area emergency, the individual shall be instructed to leave the park. In the event of a General Emergency, the individuals shall be directed to the designated relocation center by the Emergency Coordinator.</p>		

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Security is ultimately responsible for controlling access to the Exclusion Area and may, with assistance from the county sheriff, aid SCPI in the evacuation effort.

4.2 Precautions

- 4.2.1 Prompt and accurate evaluation of the emergency is necessary to determine the need for evacuation and the type which may be required.
- 4.2.2 Personnel in the affected area should be alerted promptly to expedite evacuation of the area and prevent unnecessary exposure to radiation, airborne contamination or other hazards.
- 4.2.3 Personnel working in the Radiation Control Area shall exit the area observing the normal exit procedure unless Radiation Protection has issued other directives.
- 4.2.4 The emergency response teams shall report to their assigned emergency facility, unless directed to another location by the Emergency Coordinator.
- 4.2.5 The TLDs and pocket dosimeters contained in the Primary Access Point shall be relocated to the EOF by the Security personnel if it becomes necessary to evacuate the Security guardhouse.

4.3 Immediate Actions

- 4.3.1 At the declaration of a Site Area Emergency, inform SCPI by phone or radio of the need to evacuate the park.
- 4.3.2 The decision to evacuate, the type of evacuation, the evacuation route, and the method will be made by the Emergency Coordinator.
- 4.3.3 A plant wide announcement of the emergency shall be made by the Emergency Coordinator or his designee with specific information directed to personnel who may be in the affected area using the Gai-Tronics Paging System.
- 4.3.4 The site evacuation alarm signal, which is a pulse tone, shall follow the announcement of a site evacuation.

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE</p>	<p style="text-align: center;">PROCEDURE NO. EPP-210</p>
<p style="text-align: center;">EVACUATION</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 5 OF 10</p>
<p>4.3.5 Personnel in the affected area shall place their equipment in a safe condition and proceed to the nearest or designated assembly area.</p> <p>4.3.5.1 Other evacuating personnel should avoid the affected area.</p> <p>4.3.5.2 Personnel in the Radiation Control Area shall congregate at the RCA access point unless otherwise directed by the Emergency Coordinator.</p> <p>4.3.5.3 Personnel in or who passed through the affected area shall be segregated from other personnel until monitored by Radiation Protection personnel.</p> <p>4.3.6 Construction and contract personnel should exit via their normal access point.</p> <p>4.3.6.1 If a station evacuation is announced and their normal egress is not accessible, they should assemble with the station personnel and notify their supervisor and security of their location as soon as possible.</p> <p>4.3.6.2 If a site evacuation is declared and their normal egress is not accessible, they should evacuate with station personnel but should assemble at the construction assembly area.</p> <p>4.3.7 If a site evacuation is declared, all personnel, with exception of those needed to put the station in a safe condition, should exit the station via their normal access point and proceed to their designated area unless otherwise directed by the Emergency Coordinator.</p> <p>4.3.7.1 Station personnel and visitors shall utilize the left two lanes of the site access road to the EOF.</p> <p>4.3.7.2 Construction personnel and visitors shall utilize the right two lanes of the site access road to the B&R employment office.</p>		

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE</p>	<p style="text-align: center;">PROCEDURE NO. EPP-210</p>
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<p style="text-align: center;">EVACUATION</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 6 OF 10</p>
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4.3.8 Plant Security shall be promptly notified to assist in traffic control, establishing staging areas, personnel accountability, and maintain accountability logs. Supervisors shall report accountability of all site personnel to the Emergency Coordinator within 30 minutes of an order to evacuate in accordance with EPP-209, "Personnel Accountability." Security personnel shall be responsible for continuously accounting for individuals thereafter.

4.4 Subsequent Actions

4.4.1 Personnel in the assembly areas shall remain there pending further instructions from the Emergency Coordinator.

4.4.2 Personnel shall be directed to another assembly area, should the safety of the designated area be compromised.

4.4.3 Plant Security shall verify that site personnel have been evacuated and the information has been communicated to the Emergency Coordinator.

4.4.4 Only under the Emergency Coordinator's cognizance shall personnel enter the affected area prior to the termination of the emergency.

5.0 References

5.1 CPSES Emergency Plan, Section 8

5.2 EPP-101, "Preparation of Emergency Plan Procedures"

5.3 EPP-209, "Personnel Accountability"

6.0 Attachments

6.1 Station Building Evacuation Map for Containment Personnel

6.2 Station Building Evacuation Map for Restricted Access Area

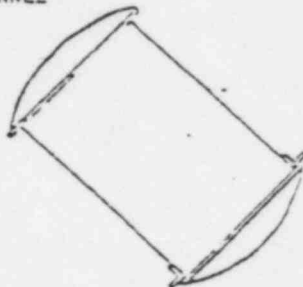
6.3 Station Building Evacuation Map for Administration Personnel, Individuals Inside Protected Area, Individuals Outside Restricted Area, and Brown & Root Construction Personnel

6.4 Evacuation Map for Fire or other Radiological Alert within the Protected Area and Site Evacuation

ATTACHMENT 1
PAGE 1 OF 1

STATION BUILDING EVACUATION
ASSEMBLY AREA FOR
CONTAINMENT PERSONNEL

NORTH ←



HALLWAY OUTSIDE
PERSONNEL HATCH

PERSONNEL AIR LOCK
ACCESS RM #35
ELEV 231'-6"
SAFEGUARD BLDG

CPSES
EMERGENCY PLAN MANUAL

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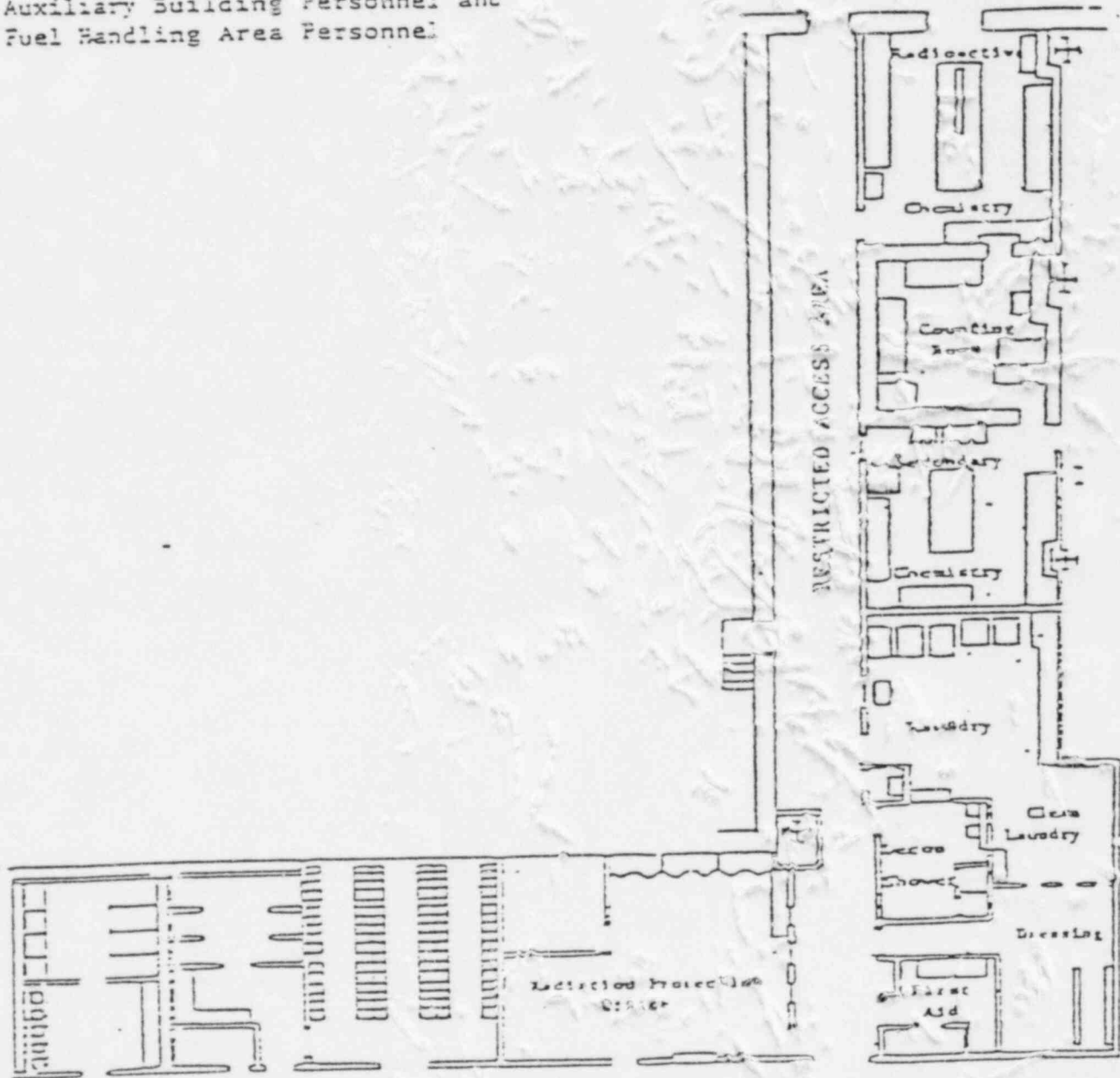
ATTACHMENT 2
PAGE 1 OF 1

STATION BUILDING EVACUATION
ASSEMBLY AREA

RESTRICTED ACCESS AREA

ASSEMBLY Areas for:

Auxiliary Building Personnel and
Fuel Handling Area Personnel



ATTACHMENT 3
PAGE 1 OF 1

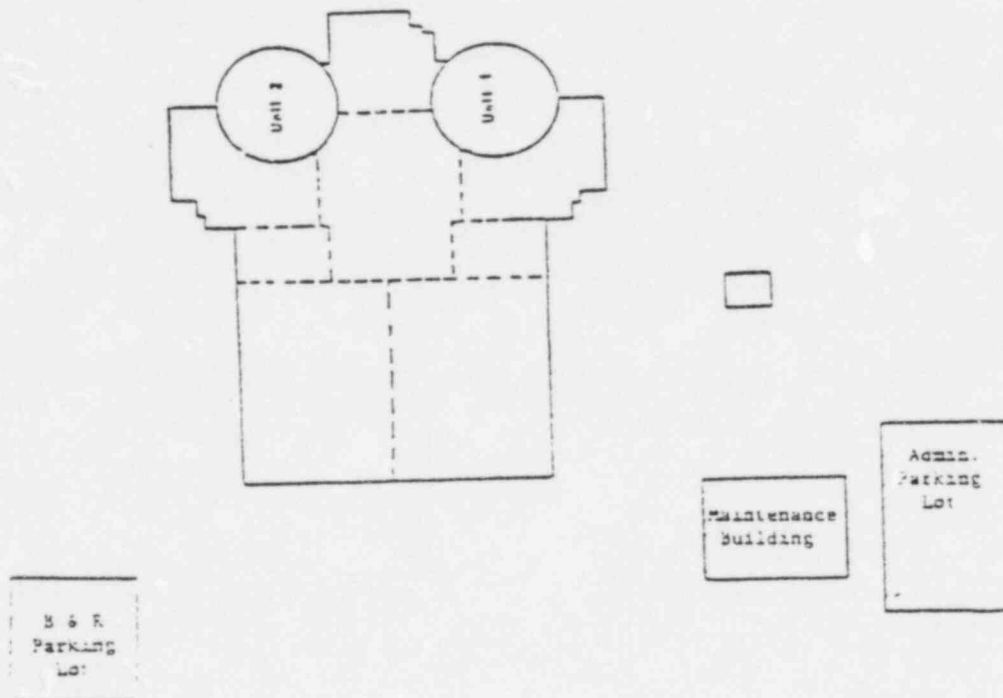
STATION BUILDING EVACUATION
ASSEMBLY AREAS

Administration Parking Lot For:

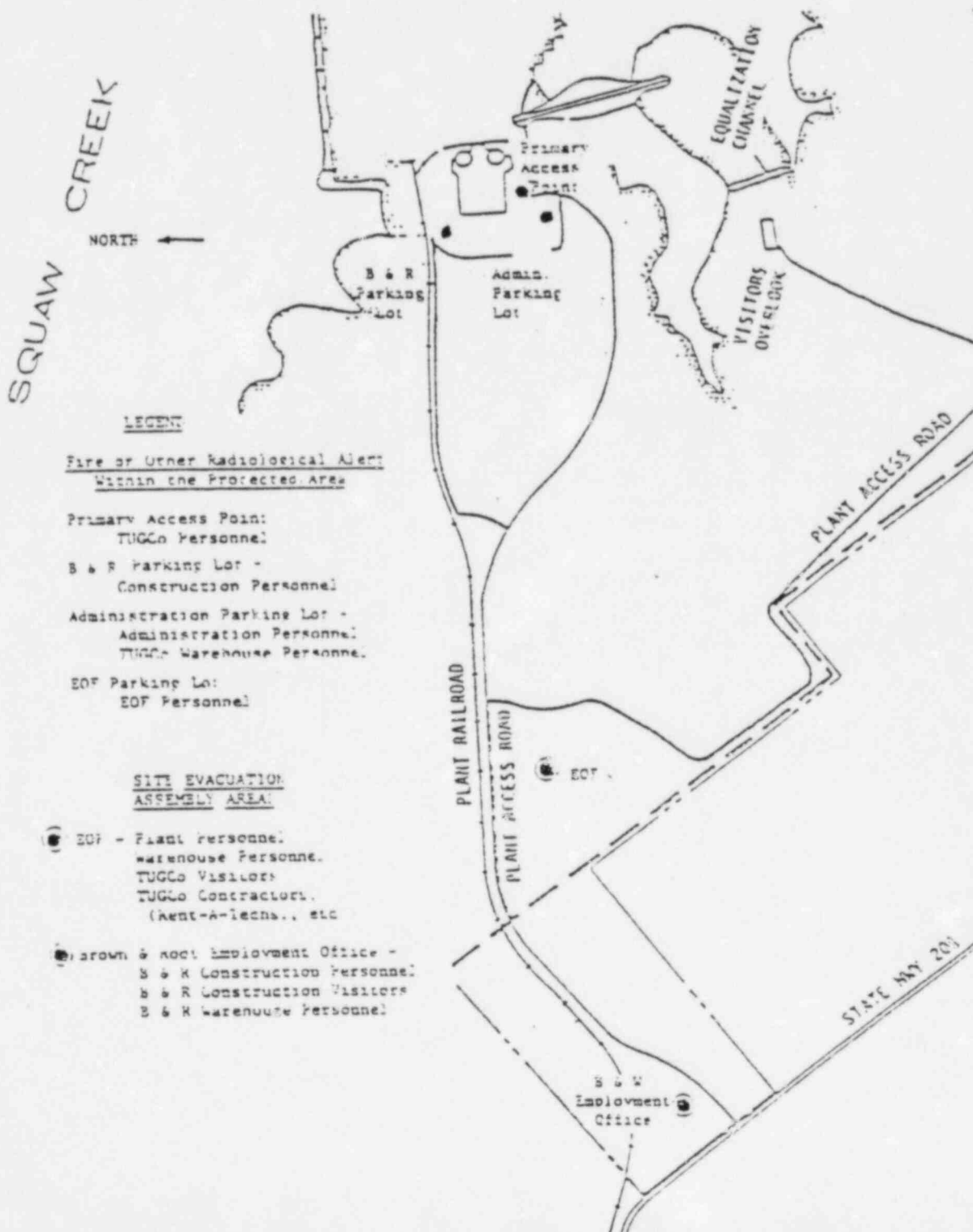
Administration Personnel
Individuals Inside Protected Area
Individuals Outside Restricted Area

Brown & Root Parking Lot For:

B & R Construction Personnel



ATTACHMENT 4
PAGE 1 OF 1



COMANCHE PEAK STEAM ELECTRIC STATION
EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

RELEASE OF TOXIC MATERIAL

PROCEDURE NO. EPP-211

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY: B.T. Lomonte DATE: 9/2/82
RADIATION PROTECTION ENGINEER

APPROVED BY: R.P. Jones DATE: 9/29/82
MANAGER, PLANT OPERATIONS

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE OCT 0 + 1982	PROCEDURE NO. EPP-211
RELEASE OF TOXIC MATERIAL	REVISION NO. 0	PAGE 2 OF 5
<p>1.0 <u>Purpose</u></p> <p>The purpose of this procedure is to establish the actions necessary for evaluation, isolation and decontamination in the event of a non-radiological toxic material release.</p> <p>2.0 <u>Applicability</u></p> <p>This procedure is applicable to all personnel at CPSES. This procedure becomes effective when issued.</p> <p>3.0 <u>Definitions</u></p> <p>3.1 <u>Permissible Exposure Limit (PEL)</u> - The concentration limit for a given material for an 8-hour exposure.</p> <p>3.2 <u>Toxic Materials</u> - A poisonous substance that through its chemical action is destructive or harmful.</p> <p>3.2.1 <u>Chlorine</u> - A heavy greenish-yellow non-flammable gas. Exposures may result in chronic lung changes, accelerated aging and suffocation. PEL = 1 ppm or 3 mg/m³</p> <p>3.2.2 <u>Formaldehyde</u> - A colorless pungent gas used in solution with methyl alcohol. Effects are skin irritation, eye irritation and sharp burning of the nose and throat. PEL = 5 ppm</p> <p>3.2.3 <u>Hydrazine</u> - Possible carcinogen. Effects are severe skin burns, liver and kidney damage, red blood hemolysis and pulmonary edema. PEL = 1 ppm or 1.3 mg/m³</p> <p>3.2.4 <u>Morpholine</u> - A flammable liquid in the alkaline class. Effects are skin, eye and respiratory tract irritation. PEL = 20 ppm or 20 mg/m³</p> <p>3.2.5 <u>Sodium Hydroxide</u> - A solid that is extremely soluble in water. Common injuries include burns of the skin and eyes. PEL = 2 mg/m³</p> <p>3.2.6 <u>Sulfuric Acid</u> - A viscous, oily liquid with a strong affinity for water, which it removes from organic material and thus chars and destroys tissue. Airborne mists or fumes cause damage to both skin and mucous membranes. PEL = 1 mg/m³</p>		

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE OCT 01 1982	PROCEDURE NO. EPP-211
RELEASE OF TOXIC MATERIAL	REVISION NO. 0	PAGE 3 OF 5
<p>4.0 <u>Instructions</u></p> <p>4.1 <u>Precautions</u></p> <p>4.1.1 In the event of a major toxic material release such as a chlorine tank rupture or a hydrazine drum failure which creates an immediate operational or personnel hazard, the on-duty Shift Supervisor shall be promptly informed of the situation.</p> <p>4.1.2 Internal facility alarms shall be activated, as necessary, all plant personnel notified and all non-essential personnel evacuated from the affected area as detailed in EPP-210, "Evacuation".</p> <p>4.1.3 The type and magnitude of the release shall be estimated for possible protective clothing and respiratory protection use before sampling.</p> <p>4.2 <u>Immediate Actions</u></p> <p>4.2.1 The affected area shall be sampled by the Chemistry and Environmental Section to determine the material concentration.</p> <p>4.2.1.1 If the concentration exceeds the PEL on site, an Unusual Event is declared.</p> <p>4.2.1.2 If the concentration exceeds 10X the PEL in the Plant, an Alert is declared.</p> <p>4.2.1.3 If the concentration exceeds 100X the PEL in the Plant, a Site Area Emergency is declared.</p> <p>4.2.2 The applicable off-site authorities shall be notified as per EPP-203, "Emergency Notification and Communications".</p> <p>4.2.3 Clean up personnel shall dress in appropriate protective clothing and respiratory protection equipment as specified by the Emergency Coordinator.</p> <p>4.2.3.1 The Emergency Coordinator may receive advice on protective measures from the Industrial Safety Representative and/or the Chemistry and Environmental Engineer.</p> <p>4.2.3.2 For full protection, personnel should use a self-contained breathing apparatus, protective clothing, hard hat, neoprene rubber gloves, goggles and rubber boots.</p>		

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE OCT 01 1992</p>	<p style="text-align: center;">PROCEDURE NO. EPP-211</p>
<p style="text-align: center;">RELEASE OF TOXIC MATERIAL</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 4 OF 5</p>
<p>4.2.4 The affected area shall be cleaned with as much chemical contamination removed as possible as detailed in the attachments.</p> <p>4.2.5 Samples shall be taken and analyzed to ensure proper decontamination in accordance with approved procedures.</p> <p>4.3 <u>Subsequent Actions</u></p> <p>4.3.1 After the release concentrations are confirmed to be below the PEL's, the Emergency Coordinator may close out or deescalate the emergency as detailed in EPP-203 "Notification and Communication".</p> <p>4.3.2 A written report to the EPA in accordance with STA-502, "Reporting of Operating Information to Regulatory Agencies Other than the NRC" shall be submitted within 15 days containing:</p> <ul style="list-style-type: none"> a) Date, time and type of incident b) Name and quantity of materials c) Extent of any injuries and assessment of actual or potential health hazards d) Quantity and disposition of recovered material. <p>5.0 <u>References</u></p> <p>5.1 CPSES Emergency Plan, Section 2.0</p> <p>5.2 EPP-203, "Emergency Notification and Communications"</p> <p>5.3 EPP-210, "Evacuation"</p> <p>5.4 STA-502, "Reporting of Operating Information to Regulatory Agencies Other than the NRC"</p> <p>6.0 <u>Attachments</u></p> <p>6.1 Emergency Actions for Toxic Material Spills</p>		

CPSSES EMERGENCY PLAN MANUAL	ISSUE DATE OCT 01 1982	PROCEDURE NO. EPP-211
RELEASE OF TOXIC MATERIAL	REVISION NO. 0	PAGE 5 OF 5

ATTACHMENT 1
PAGE 1 OF 1

EMERGENCY ACTIONS FOR TOXIC MATERIAL SPILLS

<u>Material</u>	<u>Action</u>
Chlorine	<ol style="list-style-type: none"> 1. Keep combustibles away from spill area. 2. Stop leak if you can do it without risk. 3. Use water spray to reduce vapors but <u>do not</u> put water on leak area. 4. Isolate area until gas has dispersed.
Formaldehyde Hydrazine Morpholine	<ol style="list-style-type: none"> 1. No flares, smoking or flames in area. 2. Do not touch spilled material. 3. Stop leak if you can do it without risk. 4. Use water spray to reduce vapors but do not get water inside containers. 5. Take up with sand or other noncombustible absorbent material. 6. Flush with water.
Sodium Hydroxide	<ol style="list-style-type: none"> 1. Do not touch spilled material. 2. Stop leak if you can do it without risk. 3. Take up with sand or other noncombustible absorbent material. 4. Flush with water.
Sulfuric Acid	<ol style="list-style-type: none"> 1. Do not touch spilled material. 2. Do not get water inside container. 3. Stop leak if you can do it without risk. 4. Use water spray to reduce vapors but <u>do not</u> put water on leak area. 5. Keep combustibles away from spill area. 6. Flush with water (USE CAUTION).

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 72

PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS

PROCEDURE NO. EPP-305

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY:

B. T. Lancaster
RADIATION PROTECTION ENGINEER

DATE:

6/23/82

APPROVED BY:

R. A. Jones
MANAGER, PLANT OPERATIONS

DATE:

8/3/82

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE AUG 6 1982	PROCEDURE NO. EPP-305
PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS	REVISION NO. 0	PAGE 2 OF 8

1.0 Purpose

The purpose of this procedure is to describe the methods for issuance, use, and control of personnel dosimetry for emergency conditions and to define the personnel exposure dose limits for emergency conditions.

2.0 Applicability

This procedure applies to all plant and non-plant personnel who are required to wear dosimetry in the event of an emergency or potential emergency condition at CPSES. This procedure becomes effective when issued.

3.0 Definitions

3.1 Restricted Area - Any area to which access is controlled for the purpose of radiation protection. Any area where an individual could receive a dose in excess of 2 millirem during any one hour period.

3.2 Plant Personnel - Employees of Texas Utilities Generating Company (TUGCO), whose permanently assigned job location is Comanche Peak Steam Electric Station (CPSES).

3.3 Non-Plant Personnel - An individual other than those defined above.

3.4 Speciality Badges - Special personnel monitoring devices (i.e., ring, wrist, ankle, feet, etc.) issued to monitor special exposure conditions.

4.0 Instructions

4.1 Precautions

4.1.1 If conditions permit, all personnel should complete the training requirements prior to requesting plant access and issuance of personnel dosimetry devices. However, under emergency conditions, access and dosimetry issuance may be granted by the Emergency Coordinator.

4.1.2 Precautions shall be taken to prevent the contamination, damage or loss of personnel monitoring devices. Personnel assigned such devices are responsible for exercising these precautions.

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PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS	REVISION NO. 0	PAGE 3 OF 8

4.1.3 The limits in 10 CFR Part 20 shall not be exceeded except with the concurrence of the Radiation Protection Coordinator and authorized by the Emergency Coordinator for a life saving or an urgent plant emergency in which case the limits listed on Attachment 1, shall not be exceeded.

4.1.4 For the purpose of exposure control, individuals shall not enter any area where dose rates are unknown or beyond the range of instruments being used. Personnel shall wear dosimeters appropriate for measurement of anticipated exposure levels. This shall include thermoluminescent dosimeters (TLDs) to permanently record the whole body exposures and two (2) direct-read pencil dosimeters for whole body exposure:

0 - 500 mR range and
0 - 5R range.

4.1.5 Individuals authorized to receive planned over exposures shall wear dosimeters appropriate for measurement of anticipated exposure levels. This shall include thermoluminescent dosimeters (TLDs) to record permanent whole body exposure and two (2) direct-read pencil dosimeters for whole body exposure:

0 - 5R range and
0 - 200R range.

4.1.6 Personnel with assigned badges must have an exposure update prior to entrance into a restricted area. Previous exposure shall be verified by recalling the most recent TLD evaluation list and the current pocket dosimeter list. This information will provide an estimation of current exposure data.

4.1.7 The Onsite Radiological Coordinator shall be responsible for the issuance of personnel dosimetry with proper recordkeeping maintained in accordance with HPA-117, "Personnel Exposure Records".

4.2 Immediate Actions

4.2.1 Personnel Dosimetry Issuance - Non-plant Personnel

In the event of an emergency or potential emergency condition, personnel dosimetry for non-plant emergency

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<p style="text-align: center;">PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 4 OF 8</p>

workers may be issued at the Emergency Operations Facility (EOF).

4.2.1.1 If conditions permit, each individual shall fill out Form HPA-117-1.

4.2.1.2 If the emergency situation does not warrant adequate time for prior information, a pocket dosimeter and a TLD shall be issued to the individual and an escort shall be required.

4.2.1.3 The Onsite Radiological Coordinator shall establish a file for each individual issued dosimetry.

4.2.1.4 A Pocket Dosimeter Log shall be maintained for dosimetry issuance and accountability (Attachment 2).

4.2.2 Personnel Dosimetry Issuance - Plant Personnel

4.2.2.1 Plant personnel shall assemble at the EOF if it is activated; otherwise, their dosimetry devices are available at the Security Building.

4.2.2.2 If the Security Building is not tenable, all dosimetry shall be made available at the Emergency Operations Facility.

4.2.2.3 Dosimetry devices shall be returned to the issuing facility with the exception that if the Security Building is evacuated then the devices shall be returned to the EOF.

4.2.2.4 The returned dosimetry devices and badges shall be segregated until they can be evaluated by Radiation Protection personnel.

4.2.2.5 If the assigned badge is not available, a new badge shall be issued after the individual's dosimetry record has been checked.

4.2.3 Specialty Badges

If required, specialty badges shall be issued at the discretion of Radiation Protection.

4.3 Subsequent Actions

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<p style="text-align: center;">PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 5 OF 8</p>

4.3.1 Dosimetry Evaluations

Pocket dosimetry evaluations shall be on a shift frequency. Pocket dosimeter log sheet, EPP-305-1, shall be completed and retained by the Onsite Radiological Coordinator. TLD evaluations shall be on an as needed basis.

4.3.2 Planned Over-Exposure

4.3.2.1 As soon as possible, the monitoring devices used for planned over-exposures shall be collected and evaluated.

4.3.2.2 Personnel receiving planned over-exposures greater than 25 Rem shall be transported to Hood General Hospital for a medical examination and observation.

4.3.3 Speciality Badges

Speciality badges (rings, wrist, ankle, etc) shall be evaluated as soon as possible after the job assignment has been completed.

4.3.4 Dosimetry Incidents

4.3.4.1 Lost or damaged dosimetry, or erratic operation of dosimeters shall be reported immediately to Onsite Radiological Coordinator. The Radiation Protection Section shall initiate an investigation, documenting it by use of Form HPA-113-3.

4.3.4.2 In the event a dosimeter is dropped or reads off-scale, it shall be reported immediately to the Radiation Protection Section. The Onsite Radiological Coordinator will then initiate and complete an investigation utilizing Form HPA-113-3.

4.3.4.3 Whenever an over exposure has occurred or is suspected, the individual's TLD shall be processed, his pocket dosimeter read immediately, and the results recorded. The Onsite Radiological Coordinator shall then complete Form HPA-113-2.

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE AUG 6 1982	PROCEDURE NO. EPP-305
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PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS	REVISION NO. 0	PAGE 6 OF 8
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5.0 References

- 5.1 CPSES Emergency Plan, Sections 8 and 9
- 5.2 CPSES General Health Physics Plan, Section 3
- 5.3 HPA-113, "Personnel Dosimetry"
- 5.4 HPT-301, "Personnel Exposure Records"
- 5.5 Nuclear Regulatory Commission 10 CFR Part 20, "Standards for Protection Against Radiation"
- 5.6 National Council on Radiation Protection and Measurements, Report No. 39, "Basic Radiation Protection Criteria"

6.0 Attachments

- 6.1 Attachment 1, "Planned Emergency Exposure Limits"
- 6.2 Attachment 2, "Pocket Dosimeter Log"

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE AUG 6 1982	PROCEDURE NO. EPP-305
PERSONNEL DOSIMETRY FOR EMERGENCY CONDITIONS	REVISION NO. 0	PAGE 7 OF 8

ATTACHMENT 1
PAGE 1 OF 1

PLANNED EMERGENCY EXPOSURE LIMITS (REM)

	<u>CORRECTIVE OR PROTECTIVE ACTIONS(a)</u>	<u>LIFESAVING ACTIONS (a)</u>
Whole Body	25	100
Thyroid	125(c)	No Limits (b)
Extremities	100(a)	200(a)

(a) NCRP Report No. 39, 1971

(b) Thyroid exposure should be minimized to the extent feasible by the use of respiratory protection and/or thyroid prophylaxis. However, no upper limit is specified for lifesaving action since complete loss of thyroid function may be considered an acceptable risk for saving life.

(c) EPA Protective Action Guides, Sept. 1975

Life Saving Actions

This applies to search for and removal of injured persons, or entry to prevent conditions that would probably injure numbers of people.

1. Rescue personnel should be volunteers or professional rescue personnel (e.g. firemen who "volunteer" by choice of employment).
2. Rescue personnel should be broadly familiar with the consequences of exposure.
3. Women capable of reproduction should not take part on these actions.
4. Other things being equal, volunteers above the age of 45 should be selected.
5. Internal exposure should be minimized by the use of the best available respiratory protection, and contamination should be controlled by the use of available protective clothing.
6. Normally, exposure under these conditions shall be limited to once in a lifetime.
7. Persons receiving exposures as indicated above, should avoid procreation for a period up to a few months.

Actions in Less Urgent Emergencies

This applies under less stressful circumstances where it is still desirable to enter a hazardous area to protect facilities, eliminate further escape of effluents, or to control fires.

1. Persons performing the planned actions should be volunteers broadly familiar with exposure consequences.
2. Women capable of reproduction shall not take part.
3. Internal exposure shall be minimized by respiratory protection, and contamination controlled by the use of protective clothing.
4. Normally, if the retrospective dose from these actions is a substantial fraction of the prospective limits, the actions should be limited to once in a lifetime.

ATTACHMENT 2
PAGE 1 OF 1

CORNER CREEK PEAK STEAM ELECTRIC STATION
POCKET DOSIMETER LOG

DATE	SOCIAL SECURITY NO. NAME (LAST, FIRST MIDDLE)	TLD BADGE NO	DOSIMETER SERIAL NO	TIME IN	TIME OUT	DOSIMETER READING		MHES REC'D	REMARKS
						IN	OUT		

EPP-305-1

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

STABLE IODINE THYROID BLOCKING

PROCEDURE NO. EPP-306

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY:

B.T. Lincorta
RADIATION PROTECTION ENGINEER

DATE:

9/1/82

APPROVED BY:

R.L. Jones
MANAGER, PLANT OPERATIONS

DATE:

9/14/82

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE SEP 15 1982	PROCEDURE NO. EPP-306
STABLE IODINE THYROID BLOCKING	REVISION NO. 0	PAGE 2 OF 7

1.0 Purpose

The purpose of this procedure is to prescribe the administration of Potassium Iodide (KI) tablets during emergency situations, and to specify the actions, records maintenance, and inspections necessary for using KI.

2.0 Applicability

This procedure applies to all personnel who receive, or might receive, a calculated iodine dose of 10 Rem, or greater, to the thyroid. This procedure becomes effective when issued.

3.0 Definitions

None

4.0 Instructions

4.1 Precautions

4.1.1 Potassium Iodide (KI) tablets shall be administered only when directed by the Emergency Coordinator, acting on the advice of the Radiation Protection Coordinator or his designee. The use of KI is based upon an expected individual thyroid dose of 10 Rem, or greater.

4.1.1.1 KI shall be administered in the TSC by the TSC Health Physicist.

4.1.1.2 KI shall be administered in the OSC by the OSC Supervisor.

4.1.1.3 KI shall be administered in the EOF by the Radiation Protection Coordinator.

Note: Thyroid blocking is only a recommendation. The individual must decide whether or not to consume the tablet.

4.1.2 For maximum blockage, KI should be administered one-half hour, to one hour, before exposure.

4.1.2.1 Uptake of radioiodines is reduced by 50% when KI is administered within 3-4 hours after exposure; however, little benefit is

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE SEP 15 1982	PROCEDURE NO. EPP-306
STABLE IODINE THYROID BLOCKING	REVISION NO. 0	PAGE 3 OF 7

gained when taken 10-12 hours after exposure.

- 4.1.3 Dosage is limited to one (1) 130-mg KI tablet initially, and one (1) tablet per day for a period not to exceed ten (10) days post exposure.
- 4.1.4 Potassium Iodide (KI) tablets are located in Emergency Kits and will be inspected in accordance with EPP-106, "Surveillance of Emergency Kits", and replaced as specified by the vendor.

4.2 Immediate Actions

- 4.2.1 Radioiodine concentrations may be determined from remote reading control room instrumentation, various air sampling techniques, or may be calculated based on release rates and characteristics and meteorological conditions. Use Attachment 1 to project thyroid dose as a function of airborne concentration (right ordinate) and duration of exposure (abscissa). As a backup only, thyroid dose may be estimated by gamma exposure rate (left ordinate).
- 4.2.2 When directed, as in 4.1.1 above, dispense one (1) 130-mg KI tablet to each emergency team member who might be required to enter a high-level airborne radioiodine environment.
- 4.2.3 Use Attachment 2, Form EPP-306-1, Record of Potassium Iodide Distribution, to identify each person to whom a KI tablet, initial or post-exposure, is administered.

4.3 Subsequent Actions

- 4.3.1 Once taken, and the radioiodine concentration is verified or the calculated dose determined, KI tablets should be administered, one (1) 130-mg KI tablet each day, for ten (10) days post-exposure.
- 4.3.2 Individuals with known or suspected exposure to high airborne concentrations shall receive thyroid counts on a regular basis throughout the KI treatment period to verify the effectiveness of treatment and estimate dose commitment.

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4.3.2.1 Copies of all bioassays subsequent to exposure of individuals shall be retained in accordance with HPA-117, "Personnel Exposure Records", by Radiation Protection Personnel.

4.3.3 Update Form EPP-306-1, Record of Potassium Iodide Distribution, to reflect the date and time period of exposure and airborne radioiodine concentration encountered by each individual.

4.3.3.1 Records of potassium iodide distribution shall be completed and retained in accordance with HPA-117, "Personnel Exposure Records", by Radiation Protection Personnel.

4.3.4 Restock supplies of KI tablets within ten (10) days.

5.0 References

- 5.1 CPSES Emergency Plan, Section 8.0
- 5.2 EPP-106, "Surveillance of Emergency Kits"
- 5.3 HPA-117, "Personnel Exposure Records"
- 5.4 U.S. Nuclear Regulatory Commission, Examination Of Off-Site Radiological Emergency Protective Measures For Nuclear Reactor Accidents Involving Core Melt, NUREG/CR-1131, September 1981.
- 5.5 Bureau of Radiological Health and Bureau of Drugs, Potassium Iodide As A Thyroid-Blocking Agent In A Radiation Emergency: Proposed Recommendation On Use, April 1981
- 5.6 Environmental Protection Agency, Manual Of Protective Action Guides And Protective Actions For Nuclear Incidents, EPA-520/1-75-001, September 1975.
- 5.7 National Council on Radiation Protection and Measurements (NCRP): Protection of the Thyroid Gland in the Event of Release of Radioiodine, NCRP Report No. 55, August 1, 1977.

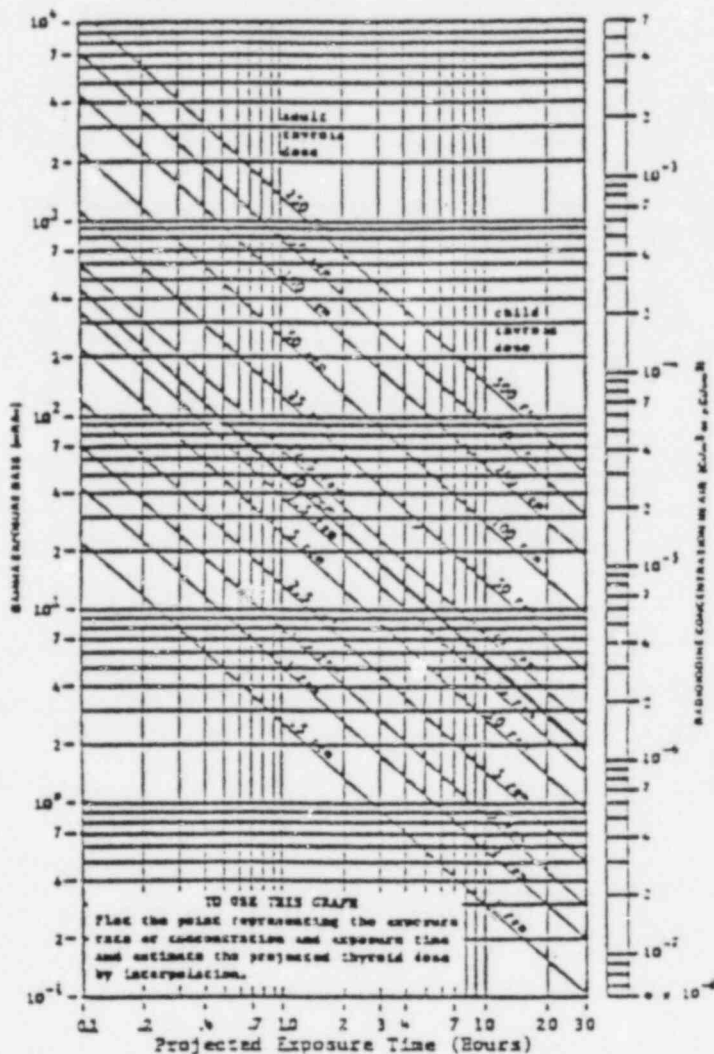
CPSES EMERGENCY PLAN MANUAL	ISSUE DATE SEP 15 1982	PROCEDURE NO. EPP-306
STABLE IODINE THYROID BLOCKING	REVISION NO. 0	PAGE 5 OF 7

6.0 Attachments

6.1 Projected Thyroid Dose Graph

6.2 EPP-306-1, Record of Potassium Iodide Distribution

ATTACHMENT 1
PAGE 1 OF 1



Projected thyroid dose as a function of either gamma exposure rate, or radioiodine concentration in air and the projected exposure time.

ATTACHMENT 2
PAGE 1 OF 1

CAINACHU PEAK STEAM ELECTRIC STATION
Radiation Protection Department
RECORD OF POTASSIUM IODIDE DISTRIBUTION

To be completed following Airborne Radioiodine Exposure

KI Administered Date Time	Dosage* (Initial, or 1st, 2nd, etc. Post-exposure)	Name	SSAN	Dosemetry Number	Organization	Signature	Date - Time of Exposure		Concentration ($\mu\text{Ci/cc}$)
							From	To	

* MINIMUM DOSAGE PERMITTED:
One (1) 130mg KI Tablet Initially, and
One (1) per day for a period not to
Exceed ten (10) days post-exposure.

EPP-306-1

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

RADIOLOGICAL MONITORING OF SITE EVACUEES

PROCEDURE NO. EPP-307

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY:

B.T. Lancaster
RADIATION PROTECTION ENGINEER

DATE:

6/23/82

APPROVED BY:

R.P. Jones
MANAGER, PLANT OPERATIONS

DATE:

8/2/82

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE AUG 6 1982</p>	<p style="text-align: center;">PROCEDURE NO. EPP-307</p>
<p style="text-align: center;">RADIOLOGICAL MONITORING OF SITE EVACUEES</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 2 OF 6</p>

1.0 Purpose

This procedure provides instructions for the radiological monitoring of personnel that have been evacuated from CPSES during an emergency or abnormal condition.

2.0 Applicability

This procedure applies to all individuals evacuated from the owner controlled area at the CPSES plant site during an Alert or higher class emergency and becomes effective when issued.

3.0 Definitions

- 3.1 Emergency Response Monitoring Team - A group of two or more personnel trained in Radiation Protection and assigned specific duties of radiological monitoring and decontamination of station evacuees. At least one team member shall be a Radiation Protection Technician.
- 3.2 Personnel Contamination - Any deposit of radioactive material on a person. The action limit for personnel contamination is 1000 dpm per probe area (Pancake probe or equivalent). A level higher than this indicates the need for decontamination.
- 3.3 Frisker - A portable count rate instrument sensitive to low levels of radioactive contamination.
- 3.4 Nasal Smears - A method of detecting contamination of the nasal passages using a Q-Tip swab stick or nasal tissue paper.
- 3.5 Owner Controlled Area - The area around the station that is owned and controlled by Texas Utilities. This area includes the exclusion area.

4.0 Instructions

4.1 Precautions

- 4.1.1 Medical attention to serious injuries should take priority over the removal of contamination. For individuals who are injured and contaminated refer to EPP-308, "Transporting of Contaminated Injured Personnel."

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<p style="text-align: center;">RADIOLOGICAL MONITORING OF SITE EVACUEES</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 3 OF 6</p>
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- 4.1.2 Contaminated individuals needing First Aid should be given priority for decontamination.
- 4.1.3 Except for Radio-Iodine decontamination, chemical decontamination should be employed as a last resort.
- 4.1.4 High level contamination on nose and mouth contamination shall be evaluated for internal contamination and the need for whole body counting or other bio-assay techniques.
- 4.1.5 Chemicals other than soap shall not be used around the eyes, ears, nose and mouth.
- 4.1.6 Continued vigorous washing may chap or abrade the skin.
- 4.1.7 The Radiation Protection Technician on the monitoring team should assure the proper valve alignment to the 5000 gallon holding tank at the Emergency Operations Decontamination Facility.
- 4.1.8 The Emergency Coordinator may waive the requirements for personnel surveys when conditions indicate that contamination is unlikely.

4.2 Immediate Actions

- 4.2.1 When the Emergency Coordinator orders a site evacuation, the Emergency Response Monitoring Team members shall proceed to the Emergency Operations Facility and the area of the Brown & Root employment office to set up Radiological Monitoring Stations.
 - 4.2.1.1 The Emergency Coordinator may order all personnel to assemble at the TUGCo parking lot and the Brown & Root time office if the CPSES Radiological release has been minimal.
- 4.2.2 Monitoring Team members should establish a personnel control point at the selected assembly areas. Barricade the area with yellow rope or ribbon to accommodate the contaminated evacuees, but take measures to prevent further spread of the contamination.

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- 4.2.3 Personnel will not be allowed to leave the assembly area until they have cleared a personnel frisk survey. Individuals with contamination levels in excess of the action limit shall be escorted to the Emergency Operations Decontamination Facilities.
- 4.2.3.1 When possible, provide temporary protective clothing and shoe covers to those individuals with the highest contamination levels during transport to the decontamination facilities. Keep the assembly area under control until a radiological survey has cleared it.
- 4.2.4 At the Emergency Operations Decontamination facility, initiate a Form HPT-303-1, "Personnel Decontamination Record", for each contaminated individual before any decontamination effort.
- 4.2.5 Clothing and personal items found to be contaminated shall be removed and placed in a plastic bag with the person's name, date and time, for later evaluation.
- 4.2.6 Start general decontamination with soap and lukewarm water per HPT-303 "Personnel Decontamination". Monitor for residual contamination and repeat as needed.
- 4.2.6.1 A dandruff shampoo may be substituted for soap.
- 4.2.6.2 For decontamination of the hands and fingernails, a soft brush may be used.
- 4.2.7 For suspected radiiodine contamination of the skin, use a 5% solution of Sodium Bisulfite and sponge into the affected area. DO NOT RUB. Follow with soap and water.
- 4.2.7.1 A 5% solution is made by adding 5 grams of Sodium Bisulfite to 100 ml of water.
- 4.2.8 If decontamination has been successful and lowered residual skin contamination to $\leq 1,000$ dpm (Beta-Gamma) or 100 dpm (Alpha) the individuals may be released for First Aid or to their work supervisor.

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4.2.9 If decontamination has been unsuccessful after 5 soap and water washes, "Other Decontamination Techniques" described in Attachment I may be tried.

4.3 Subsequent Actions

- 4.3.1 Continue the decontamination steps in Attachment I until all detectable activity has been removed or until there is no longer a decrease in the contamination level.
- 4.3.2 Complete the applicable portions of HPT-303-1 and distribute according to the routing list on the form.
- 4.3.3 Consult the Radiation Protection Engineer, his designee or the Emergency Coordinator if significant skin contamination still exists after trying some of the other techniques outlined in Attachment I.

5.0 References

- 5.1 CPSES Emergency Plan, Sections 8 and 9
- 5.2 EPP-101, "Preparation of Emergency Plan Procedures"
- 5.3 EPP-308, "Transporting of Contaminated Injured Personnel"
- 5.4 HPA-116, "Personnel Contamination Monitoring"
- 5.5 HPT-303, "Personnel Decontamination"
- 5.6 HPT-504, "Personnel Contamination Monitoring"

6.0 Attachments

- 6.1 Attachment I, "Other Decontamination Techniques"

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ATTACHMENT 1
PAGE 1 OF 1

OTHER DECONTAMINATION TECHNIQUES

1. Make Tide or other plain detergent into a paste. With additional water, wash with a mild scrubbing action. Use care not to chap or erode the skin. Monitor after each step.
2. Use a mixture of 50% Tide and 50% corn meal. Make into a paste. Wash affected area with a mild scrubbing action. Monitor again.
3. Sweating may decontaminate a hand or foot by placing a cotton glove or stocking over it, then placing in a plastic glove or bootie. Tape shut and allow body heat to produce sweating for several minutes. Remove the bag or bootie and cotton garment and wash with soap and warm water.
4. Titanium dioxide paste (prepare by mixing precipitated titanium dioxide paste with a small amount of lanolin). Work the paste into the contaminated area for 2 minutes. Rinse and wash with soap and warm water.
5. Mix equal volumes of a saturated solution of potassium permanganate and 0.2N Sulfuric Acid, (saturate solution of $KMnO_4$ is 6.4 grams per 100 ml of H_2O). Pour over wet hands, rubbing the affected area using a hand brush not more than 2 minutes. Rinse with water.
6. Apply a freshly prepared 5% solution of sodium acid sulfite, (solution made by dissolving 5 grams of $NaHSO_3$ crystals in 100 ml distilled water). Use in the same manner as No. 5 above which should remove the permanganate stain. Do not use near the eyes, nose, mouth or other body openings. Apply lanolin or hand cream when completed.
7. Flush the eyes by rolling back the eyelids as far as possible and flush with large amount of water or isotonic irrigants if available.
8. Flushing of lacerations. Wash the wound with large amounts of water and spread the edges of the wound to stimulate bleeding. If bleeding is profuse, bandage the wound and continue decontamination of the surrounding area.

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

TRANSPORTING CONTAMINATED INJURED PERSONNEL

PROCEDURE NO. EPP-308

REVISION NO. 1

SAFETY-RELATED

SUBMITTED BY:

B. T. Lovesth
RADIATION PROTECTION ENGINEER

DATE:

10/20/82

APPROVED BY:

R. A. Jones
MANAGER, PLANT OPERATIONS

DATE:

11/4/82

CPSES EMERGENCY PLAN MANUAL	ISSUE DATE NOV 30 1982	PROCEDURE NO. EPP-308
TRANSPORTING CONTAMINATED INJURED PERSONNEL	REVISION NO. 1	PAGE 2 OF 7

1.0 Purpose

This procedure provides guidance for the transporting of injured contaminated personnel from the CPSES plant site to Hood General Hospital.

2.0 Applicability

This procedure applies to contaminated individuals with injuries requiring offsite emergency medical care. Utilization of this procedure constitutes an UNUSUAL EVENT and implements the CPSES Emergency Plan. This procedure becomes effective when issued.

3.0 Definitions

3.1 Minor injury - an injury that does not endanger the life of an individual, and first aid is generally sufficient treatment. Radiological decontamination should be completed prior to treating the injury.

3.2 Serious injury - an injury or condition including unconsciousness, profuse bleeding, extensive burns, severe pain without an obvious injury, an obvious fracture or any other injury that requires professional medical treatment as soon as possible. Contamination is the lesser consequence when serious injuries are involved.

3.3 Radiation overexposure - a confirmed whole body exposure of 25 REM or greater, requiring a minimum of observation for medical treatment.

4.0 Instructions

4.1 Precautions

4.1.1 Unless an overexposure has been preplanned (EPP-305, "Personnel Dosimetry for Emergency Conditions"), personnel exposures should not exceed the limits set in 10CFR20.

4.1.2 Medical assistance rendered shall be within the scope of the rescuer's qualifications.

4.1.3 Contaminated individuals transported to the hospital shall be accompanied by a Radiation Protection Technician.

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4.1.4 If any individual is suspected of inhaling or ingesting airborne radioactivity, notify the Emergency Coordinator and Radiation Protection Coordinator so arrangements can be made for a whole body count and/or collection of bioassay specimens.

4.2 Immediate Actions

4.2.1 If possible, remove the victim(s) from the accident area if the area is highly contaminated or offers further danger to victim and/or rescuer.

4.2.2 Provide appropriate emergency medical care immediately for serious injuries.

4.2.3 Notify the Shift Supervisor (Emergency Coordinator) or the Control Room and, if available, the Radiation Protection Coordinator, when practical, of the following:

4.2.3.1 Number of persons injured.

4.2.3.2 Current location of those injured.

4.2.3.3 Obvious injuries.

4.2.3.4 Known/suspected radiological condition.

4.2.3.5 Request for additional assistance.

4.2.3.6 Medical treatment rendered.

4.2.4 If offsite medical transportation support is required, the Emergency Coordinator, or designee, should contact either the Glen Rose Ambulance Service or the Hood General Hospital Ambulance using EPP-203, "Emergency Notification and Communication", and as a minimum, inform them of the following:

4.2.4.1 Location to report to at CPSES.

4.2.4.2 Final destination: Hood General Hospital

4.2.5 The Emergency Coordinator, or designee, shall establish communications with the Hood General Hospital and inform them of the following:

4.2.5.1 Number and extent of injured personnel.

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4.2.5.2 Radiological status of the injured (if known).

4.2.6 The Emergency Coordinator, or designee, shall notify Security of the pending arrival of an emergency vehicle and the location where it should be directed.

4.2.7 Radiation Protection personnel shall assist in preparing seriously injured and potentially contaminated personnel for transportation to the hospital.

4.2.7.1 If the injured can be decontaminated, do so in accordance with HPT-303, "Personnel Decontamination" and record the results on the HPT-303-1 and inform the Emergency Coordinator and the Radiation Protection Coordinator of the change in radiological status.

4.2.7.2 Remove as much contaminated material from the victim as possible, without aggravating the injuries.

4.2.7.3 If decontamination is not possible due to wound aggravation, take precautions to prevent the spread of contamination during transport and at the hospital.

4.2.7.4 Complete as much of Form EPP-308-1 as possible. Copies of the completed form shall be distributed accordingly:

- a. A copy shall accompany the victim(s).
- b. A copy shall be directed to the Emergency Coordinator or designee.
- c. A copy shall be directed to the Radiation Protection Engineer or designee.

4.2.8 If practical, move the victim(s) to the location designated by the Emergency Coordinator.

4.2.9 Communications shall be maintained between the hospital, ambulance, and CPSES.

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<p style="text-align: center;">TRANSPORTING CONTAMINATED INJURED PERSONNEL</p>	<p style="text-align: center;">REVISION NO. 1</p>	<p style="text-align: center;">PAGE 5 OF 7</p>
<p style="margin-left: 40px;">4.2.9.1 Communications between the hospital and CPSES shall be by telephone.</p> <p style="margin-left: 40px;">4.2.9.2 Communications between the hospital and the ambulance shall be by two-way radio.</p> <p style="margin-left: 40px;">4.2.9.3 As an optional communications link between the ambulance and CPSES, the Radiation Protection Technician accompanying the victim(s) may be issued a hand-held radio.</p> <p style="margin-left: 40px;">4.2.10 Protective clothing shall be utilized by personnel attending the victim(s) per instructions issued by the attending Radiation Protection Technician.</p> <p style="margin-left: 20px;">4.3 <u>Subsequent Actions</u></p> <p style="margin-left: 40px;">4.3.1 The Emergency Coordinator or designee shall alert Hood General Hospital to the information listed on EPP-308-1.</p> <p style="margin-left: 40px;">4.3.2 For personnel receiving minor injuries, complete first aid treatment and decontamination as required.</p> <p style="margin-left: 80px;">4.3.2.1 Radiation Protection personnel shall complete the decontamination Form HPT-303-1.</p> <p style="margin-left: 40px;">4.3.3 If an overexposure is suspected or confirmed, process the victim's personnel monitoring devices immediately. The results shall be relayed to the Emergency Coordinator and the Radiation Protection Coordinator. The Emergency Coordinator should transmit the information to the medical treatment personnel.</p> <p style="margin-left: 80px;">4.3.3.1 Radiation Protection personnel shall complete the dose recording and reporting process per HPA-113, "Personnel Dosimetry".</p> <p style="margin-left: 40px;">4.3.4 All swabs, rags and flushing solutions used for treating injuries shall be retained for future evaluation.</p> <p style="margin-left: 40px;">4.3.5 All personnel involved with transportation and offsite treatment shall be surveyed to assure they are not contaminated.</p>		

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4.3.6 Personnel monitoring devices shall be collected from all involved individuals and processed as soon as practical.

4.3.7 The ambulance and hospital facilities shall not be released until appropriate surveys are performed to assure contamination levels do not exceed limits for unrestricted areas (<1000 dpm/100 cm² or <0.05 mR/hr. for beta-gamma and <100 dpm/100 cm² for alpha).

4.3.8 If more definitive medical care is required, Radiation Management Corporation shall be contacted to determine which of their facilities is available and transportation shall be arranged by the Emergency Coordinator or Radiation Protection Coordinator contingent upon the most dominating injury or condition.

5.0 References

- 5.1 CPSES Emergency Plan, Section 10.2
- 5.2 EPP-203, "Emergency Notification and Communications"
- 5.3 EPP-307, "Radiological Monitoring of Evacuees"
- 5.4 CPSES General Health Physics Plan, Section 8.0
- 5.5 HPA-113, "Personnel Dosimetry"
- 5.6 HPT-303, "Personnel Decontamination"

6.0 Attachments

- 6.1 Form EPP-308-1, "Injured Personnel Medical Data Record"

ATTACHMENT 1
PAGE 1 OF 1

INJURED PERSONNEL MEDICAL DATA RECORD

1. Name of Injured Contaminated Personnel: _____
2. TLD Badge Number: _____
3. Date and Time of the Accident: _____
4. Brief description of the accident: _____

5. Number of casualties being transported: _____
6. Obvious injuries/medical assistance rendered:
 1. _____
 2. _____
 3. _____
 4. _____
7. Radiation over exposure: ___ N/A; ___ Suspected; ___ Confirmed; ___ REMS
8. Radiological Contamination: Predecon _____ Post-decon _____
 1. _____
 2. _____
 3. _____
 4. _____
9. Decontamination techniques used: _____

10. Radioisotopes involved: _____
11. Type of transporting vehicle: _____
12. Time of departure from the plant: _____

Signature _____

Date _____

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

OFFSITE EMERGENCY RADIOLOGICAL SURVEYS

PROCEDURE NO. EPP-309

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY:

B. T. Lancaster
RADIATION PROTECTION ENGINEER

DATE:

9/3/82

APPROVED BY:

R. G. Jones
MANAGER, PLANT OPERATIONS

DATE:

7/29/82

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE OCT 01 1982</p>	<p style="text-align: center;">PROCEDURE NO. EPP-309</p>
<p style="text-align: center;">OFFSITE EMERGENCY RADIOLOGICAL SURVEYS</p>	<p style="text-align: center;">REVISION NO. 0</p>	<p style="text-align: center;">PAGE 2 OF 17</p>
<p>1.0 <u>Purpose</u></p> <p>This procedure establishes a survey program in order to thoroughly assess offsite radiological conditions during an emergency at Comanche Peak Steam Electric Station (CPSES).</p> <p>2.0 <u>Applicability</u></p> <p>This procedure is applicable to all personnel performing offsite radiological monitoring during an Alert or higher class emergency. This procedure becomes effective when issued.</p> <p>3.0 <u>Definitions</u></p> <p>3.1 <u>Disintegration/Count (D/C)</u> - The efficiency factor derived for event type counters for use in activity determination.</p> <p>3.2 <u>Emergency Response Facility</u> - The Control Room, the Technical Support Center, the Operations Support Center or the Emergency Operations Facility from where instructions to the field monitoring teams will originate. The principal ERF accommodates the Emergency Coordinator and may include Radiation Protection management personnel.</p> <p>4.0 <u>Instructions</u></p> <p>4.1 <u>Precautions</u></p> <p>4.1.1 Individuals making the surveys should exercise caution to minimize exposure and limit the spread of contamination.</p> <p>4.1.2 No survey should be taken if the action would result in personnel exposure in excess of the 10CFR20 limits.</p> <p>4.1.3 All surveys will be taken in accordance with the current Health Physics Technical Procedures unless otherwise directed by the Offsite Radiological Coordinator (ORC) or in his absence, the Technical Support Center Health Physicist (TSC-HP) or the Emergency Coordinator (EC).</p> <p>4.1.4 Emergency survey teams shall consist of a minimum of two persons; at least one member of the survey team shall be a Radiation Protection Technician meeting A.N.S.I. 18.1 qualifications.</p> <p>4.1.5 Ensure the vehicle to be used for field surveys is fully gassed and equipped with mobile radio (preset to the CPSES emergency frequency). Radiological protection survey instruments and equipment, as found in the Radiological Response field kit (Attachment 5), shall be utilized.</p>		

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	<p>4.1.6 Field teams should keep at least one dose-rate monitoring instrument in the "on" position to minimize unexpected or lengthy exposure to the plume.</p> <p>4.1.7 All portable radiation instruments shall be used in accordance with HPT-801, "Operation of Portable Survey Instruments".</p> <p>4.2 <u>Immediate Actions</u></p> <p>4.2.1 All personnel assigned to offsite monitoring teams shall assemble at the Emergency Operations Facility unless otherwise directed by the Radiation Protection Coordinator or the Emergency Coordinator.</p> <p>4.2.2 The Radiation Protection Coordinator shall assign survey priorities based on assessment needs or as conditions warrant. In the interim, the Emergency Coordinator may assign priorities.</p> <p>4.2.3 Obtain offsite monitoring kit from its storage location in the EOF.</p> <p>4.2.4 The lines of reportability for offsite monitoring teams are as follows:</p> <p style="padding-left: 40px;">4.2.4.1 During an Alert emergency action level, report to the TSC-HP.</p> <p style="padding-left: 40px;">4.2.4.2 During a Site Area Emergency, or higher action level, report to the ORC in the EOF.</p> <p>4.2.5 Offsite monitoring teams shall establish radio contact, on the emergency frequency, with the TSC or EOF prior to departing the site, upon completion of monitoring at each location, and upon return to the site.</p> <p style="padding-left: 40px;">Back-up communications, in the event of radio failure or loss of contact, shall be by telephone with (later) (EOF), or (later) (TSC).</p> <p>4.2.7 The following field surveys shall be taken.</p> <p style="padding-left: 40px;">4.2.7.1 Dose rates, general area (both window open and window closed; and true Beta calculations based on calibrated Beta Factor, posted on the instrument).</p> <p style="padding-left: 40px;">4.2.7.2 Airborne radioactivity/radioiodine samples (Silver Zeolite, or equivalent cartridge, and</p>	

particulate filter) shall be taken with a flow rate of 2 CFM for a 5-minute period yielding a 10 FT³ air sample. Evaluate the cartridge for gross Iodine activity using either the portable MCA or by returning the cartridge to the EOF for counting. Immediately transmit survey data using EPP-309-1, to notify the EOF of results equal to or greater than 1×10^{-7} ci/cc.

- 4.2.8 Contamination level surveys shall be performed as appropriate (i.e. positive results from direct radiation and airborne surveys).
- 4.2.9 Environmental TLD evaluations shall be collected ONLY when directed by the ORC, TSC - HP, or EC.
- 4.2.10 Using the plume centerline sector as a base and covering the 22.5° sector on either side as a minimum, start surveying at the environmental T.L.D. locations nearest the plant, then radiate outward being sure to include all other TLD locations in the affected area (Attachments 3 and 4).
- 4.2.11 Offsite survey teams shall record survey data on EPP-309-1, "Offsite Emergency Radiological Survey Data Sheet," Attachment 1, which will be used to transmit pertinent data to the EOF.
- 4.2.11.1 When transmitting survey data, only those "Boxed" items of Attachment 1 will actually be transmitted.

Example: "EOF this is Team One. I have survey data. Are you ready to copy? OVER."

"Team One this is EOF. Ready to copy. OVER."

EOF this is Team One, message follows:

NNW 4.6, 1245,
PART 1, 32, 20, 36;
PART 2, 2000;
PART 3, 1500;
PART 4, 4.2E-10;
PART 5, 2.8E-8;
PART 6, NO;

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE OCT 01 1982</p>	<p style="text-align: center;">PROCEDURE NO. EPP-309</p>
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<p style="text-align: center;">Did you copy, OVER."</p> <p style="text-align: center;">"Team One this is EOF, Roger, copied, OVER."</p> <p style="text-align: center;">4.2.11.2 EOF Communications shall record transmitted survey data on EPP-309-2, "EOF/TSC Communications Sheet - Offsite Survey Results", Attachment 2.</p> <p style="text-align: center;">4.2.12 Additional areas of survey will be based on directly read data and guidance from the TSC Health Physicist, the Offsite Radiological Coordinator, or the Emergency Coordinator.</p> <p>4.3 <u>Subsequent Actions</u></p> <p>4.3.1 When the field surveying is complete, monitor the involved personnel and equipment for contamination and decontaminate as necessary.</p> <p>4.3.2 All survey samples and results shall be returned to the appropriate response facility for definitive analysis and evaluation.</p> <p>4.3.3 The field survey teams shall keep the Offsite Radiological Coordinator apprised of their status by maintaining radio or telephone contacts from the field, and by reporting "IN" on return to the Assembly Point to await further instructions.</p> <p>5.0 <u>References</u></p> <p>5.1 CPSES Emergency Plan, Section 7.3</p> <p>5.2 CPSES General Health Physics Plan, Sections 5 & 6</p> <p>5.3 ENV-204, "Placement, Collection, Preparation, and Shipment of TLD's"</p> <p>5.4 HPT-819, "Use of the Nuclear Data-6, Portable MCA"</p> <p>5.5 HPT-601, "Radiation Surveys"</p> <p>5.6 HPT-602, "Contamination Surveys"</p> <p>5.7 HPT-603, "Airborne Surveys"</p> <p>5.8 HPT-801, "Operation of Portable Survey Instruments"</p>		

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<p>6.0 <u>Attachments</u></p> <ul style="list-style-type: none"> 6.1 Offsite Emergency Radiological Survey Data Sheet, EPP-309-1 6.2 EOF/TSC Communications Sheet - Offsite Survey Results, EPP-309-2 6.3 Offsite Survey Map with Environmental TLD Locations 6.4 Description of Environmental TLD Locations 6.5 Radiological Response Field Kit Contents 		

ATTACHMENT 1
PAGE 1 OF 1

OFFSITE EMERGENCY RADIOLOGICAL SURVEY DATA SHEET

Note: When transmitting survey data to DDP/TEC, ONLY those "boxed" items of this form will actually be transmitted.

TEAM _____ LEADER _____ MEMBER _____
 SURVEY LOCATION _____
 TIME OF SURVEY _____ hours DATE _____

PART 1 Deep Beta Survey:
 Instr. # Cal. Due Beta factor (Bf) Window Open Window Closed
 _____ True Counts _____
 _____ sr/hr. _____ sr/hr.
 $WB = WC \div Bf = \text{True Beta}$
 (-) \div _____ mRad/hr.

PART 2 Ground Survey - Direct Scan:
 Instr. # Cal. Due Type of Probe Eff. Factor (D/C)

 EFF. Factor \times NET CPM = DPM/Scan
 (Total CPM - BKG CPM)
 _____ \times _____ = _____ DPM/Scan

*assume 40 cps background for all offsite locations

PART 3 Ground Survey - Smart:
 Instr. # Cal. Due Type of Probe Eff. Factor (D/C)

 EFF. Factor \times NET CPM = DPM/100 cm²
 (Total CPM - BKG CPM)
 _____ \times _____ = _____ DPM/100 cm²

*assume 40 cps background for all offsite locations

PART 4 Airborne Particulate Activity:
 Instr. # Cal. Due Type of Probe Eff. Factor (D/C) Total CPM BKG CPM

 $\text{EFF. FACTOR} \times \text{NET CPM} \times 1.5 \frac{E-116 \text{Ci}^{-1} \text{ft}^3}{\text{DPM-cm}^2} = \text{_____ } \mu\text{Ci/cc}$
 Vol. (ft³)
 NET CPM = Total CPM - BKG CPM

PART 5 Airborne Radioiodine Sample:
 ID-# Cal. Due Sample Volume (CC) Counting Time Radioiodine Act.

 _____ $\mu\text{Ci/cc}$

PART 6 Environmental TLD: Note: Offsite survey teams shall collect environmental TLD's ONLY when directed by the Offsite Radiological Coordinator, Technical Support Center - EP, or the Emergency Coordinator.
 Requested _____
 Yes/No
 Removed TLD# _____
 Date/Time _____ Results of TLD count _____ sr.

PART 7 Other (Data or Remarks):

Transmitted by: _____ Name - Print and Sign Date/Time _____

ATTACHMENT 2
PAGE 1 OF 1

EOF/TSC COMMUNICATIONS SHEET - OFFSITE SURVEY RESULTS

DATE: _____

TEAM _____ SURVEY LOCATION _____

TIME OF SURVEY _____ hours

PART 1. Dose rate survey:

Window Open _____ mr/hr, Window Closed _____ mr/hr

True Beta _____ mRad/hr

PART 2. Ground survey - Direct scan: _____ DPM/Scan

PART 3. Ground survey - Smear: _____ DPM/100 cm²

PART 4. Airborne Particulate Activity: _____ μ Ci/cc

PART 5. Airborne Radioiodine Sample: _____ μ Ci/cc

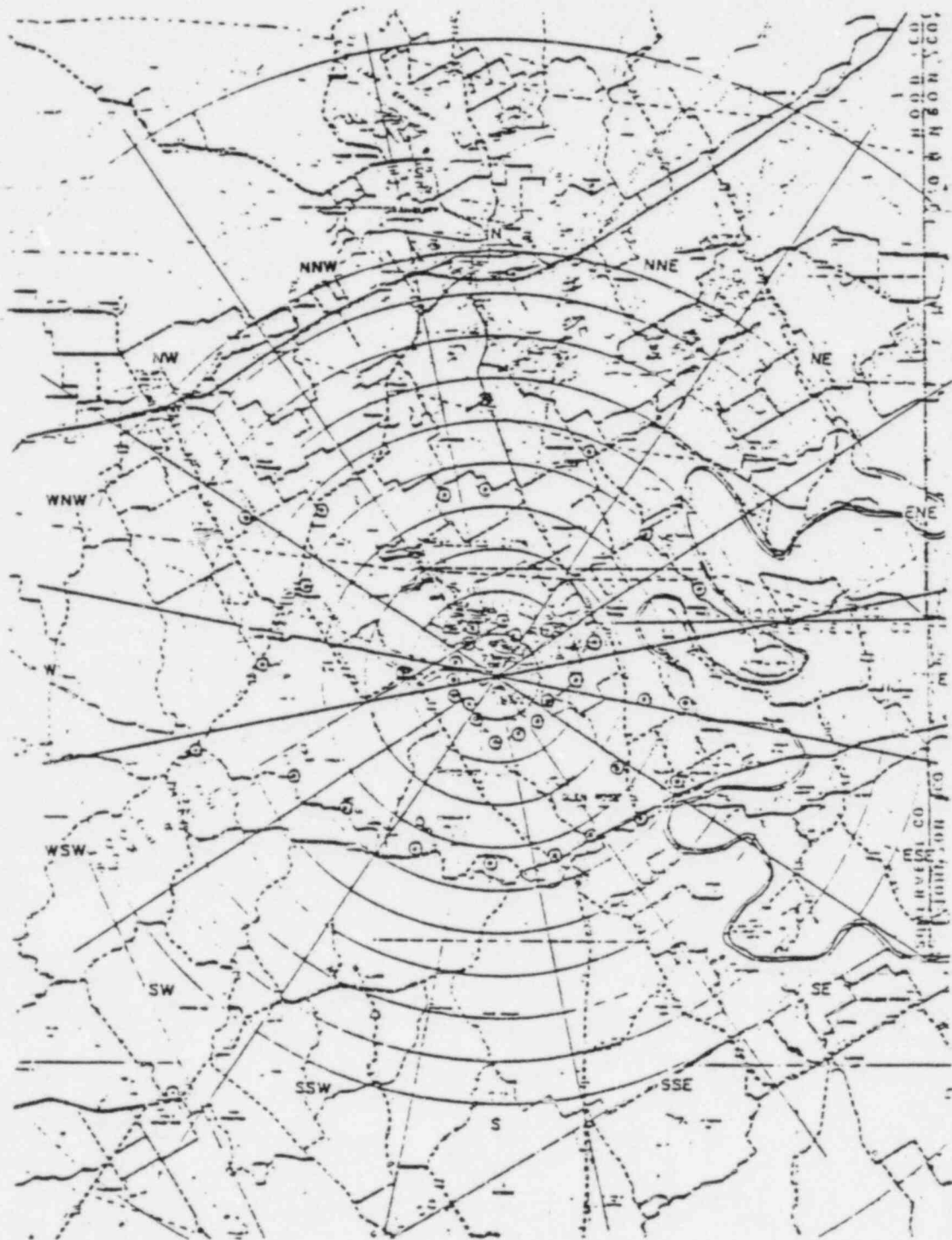
PART 6. Environmental TLD removal: Authorized _____
yes or no

Removed TLD # _____ TLD Results _____

PART 7. OTHER (Data or Remarks): _____

Received by: _____
Name - Print and Sign Date/Time

ATTACHMENT 3
PAGE 1 OF 1



ATTACHMENT 4
PAGE 1 OF 7

SAMPLE LOCATION
SECTOR-MI/DIRECT

LOCATION DESCRIPTION

- | | |
|----------|--|
| SSE-4.5 | Take County Road 201 South from plant to Glen Rose. At intersection of Road 201 and Hwy. 67. TLD is in tree at Northeast corner of intersection; left side of road, by church sign. |
| SW-12.3 | Continue on Hwy. 67 towards Stephenville to (2nd or next Chalk Mountain and Jackson Texaco Station to last) and Grocery Store approximately 11 miles from intersection of Hwy. 67 and County Road 201. TLD is located in Air Monitoring Station on West side of Texaco Station. |
| S-4.2 | Return to Glen Rose, 10 miles to Farm Road 205, Dinosaur State Park Road, and turn left. Proceed on Farm Road 205 for 0.8 mile. The TLD is located on South side of road, left side, across from two white houses. TLD is on a cedar fence. |
| SSW-4.4 | Continue driving towards Dinosaur State Park and just after you pass the park entrance, you will go up a hill. As you reach the crest of the hill, the TLD is located on a telephone pole on North side, right side of road, 3.2 miles from Hwy. 67 and Farm Road 205 intersection, or 2.4 miles from last TLD location. |
| SW-4.8 | Continue driving Northwest on Farm Road 205 and when road forks take right road which is approximately 3.9 miles from Hwy. 67, Farm Road 205 intersection, or 0.7 miles from last TLD. Road runs along Paluxy River and is a dirt road. Just after you cross Paluxy River, the road forks. Take the left road until you come to a sign on right side of road that says, "Cedar Brake Ranch," which is 5.5 miles from Hwy. 67, Hwy. 205 intersection or 1.6 miles from last TLD. TLD is located on right of gate on fence post. |
| WSW-5.35 | Continue driving Northwest on this dirt road for 1.6 miles and you will come to McGinnis Horse Ranch. TLD is located on East side, right side of road in clump of trees across from second house on left. |

ATTACHMENT 4
PAGE 2 of 7

SAMPLE LOCATION
SECTOR-MI/DIRECT

LOCATION DIRECTION

WSW-7	Continue Northwest on dirt road to intersection with Paluxy Hwy. 204. TLD is on cedar tree pole just before intersection and across from the old barn 2.4 miles from last TLD.
W-5.5	Take a right on Hwy. 204 and go 2.4 miles to Hood County Road 219-B. TLD is located on South, Right side of County Road 204 in cedar bush across from entrance to County Road 219-B.
WNW-5.0	Continue on North to intersection of Hwy. 201 and Hwy. 51 and take a left towards Granbury. Just as you turn left on Hwy. 51, TLD is on East, right side of road just before small creek. TLD is on fence by a marker that has "476" on it; 1.9 miles from last TLD.
NW-5.7	Continue on towards Granbury from intersection Hwy. 201, Hwy. 51 and 1.9 miles to Hood County Road 206. TLD is located on East, right side of road in clump of trees, across from entrance to Hood County Road 206.
WNW-6.7	Turn left or NW on Hood County Road 206. Road will turn sharply to left after 0.5 mile. Continue straight ahead after turn for 1.5 miles and you will cross railroad. The Pack's house is first house on right. TLD is located at corner of fence, just before you get to Pack place, in a rose bush.
NW-9.9	Continue traveling West on this road for 0.8 mile. Gulf Gas Gathering Station will be on left side of road at intersection with Hood County Road 201. Take a right and go to Tolar. At the intersection of County Road 201 and Hwy. 377, turn right. TLD is on corner fence post just past restaurant on South, right side of road. 0.1 mile from County Road 201, Hwy. 377 intersection.

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SAMPLE LOCATION
SECTOR-MI/DIRECT

LOCATION DESCRIPTION

N-9.4	Leave Tolar on Hwy. 377 going to Granbury. When entering Granbury, take bypass 377. After you cross Lake Granbury, TLD is located in Air Monitoring Station behind Exxon Station on North, left side of Hwy.
N-6.5	Leave Granbury going South towards Glen Rose on Hwy. 144. Three (3) miles South of Hwy. 144 as you come to top of hill there is a gate on the West, right side of Hwy. TLD is located just past this gate on the fence. There is also an old broken windmill by TLD location.
N-4.4	Continue traveling South on Hwy. 144 for 1.7 miles to County Road 210 which will be the first paved road on right; turn right on this road. Continue West until road turns right, North. TLD is located just past corner by gate where two fences intersect. 0.6 miles from intersection of County Road 210 and Hwy. 144.
NNW-4.6	Continue North on County Road 210 and take next County Road 212. Turn left, South, and approximately 0.1 mile the Smith place, "Rocking Chair Ranch," is on the left. TLD is located at Air Monitoring Station just inside the gate.
NNE-5.65	Return to Hwy. 144 and turn right, South, to FM 2425 which is approximately 0.1 mile. Turn left and go about 1.6 miles to intersection of FM 2425 and County Road 310. TLD is located on fence corner just past this intersection on FM 2425 on left side of road.
NE-4.8	Turn right at next intersection by Mambrino Baptist Church and go 2.2 miles to "Mitchell Bend Store." TLD is located on left, East side of road behind road sign with arrow pointing North. TLD is on fence in clump of trees.

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PAGE 4 OF 7

SAMPLE LOCATION
SECTOR-MI/DIRECT

LOCATION DESCRIPTION

- ENE-5 At "Mitchell Bend" Store, FM 2425 turns West, right, and a County Road will go in front of store to left. Take this County Road to left for 1.3 miles. Just before you come to a house that is 1.5 miles, TLD is located on East, left, side of road on fence. This road has no outlet so you have to double back to FM 2425 and take a left to Hwy. 144.
- N-1.2 Turn right on Hwy. 144 to next road on left, 0.5 mile. Continue on this dirt road going West until you come to Squaw Creek Park Incorporated gate. After checking in with park guard, continue on this road until you come to water tank and well. TLD is in tree approximately 150 feet West of tank.
- Note: Access gate to Squaw Creek Park is locked after normal daylight hours.
- E-3.5 Return to Hwy. 144 from N-1.2 and turn right, South. Continue South on Hwy. 144 for 3.6 miles to Happy Hill Farm. Turn in farm entrance and go to first road on right and turn right. Stay to left and TLD is located in Air Monitoring Station just before houses that are behind Red School House.
- E-4.2 Return to Hwy. 144 and continue South for one mile to County Road 200, Rainbow Road which turns left by Butane Storage Tanks. Continue on County Road 200 for 0.6 mile to County Road that goes straight East as County Road 200 turns right. Continue down dirt road until road takes a sharp left, 1 mile. After road takes a sharp left, Hornick Farm entrance is first one on East, right side of road. TLD is located on left gate post as you enter.
- ESE-4.7 Return to County Road 200 and continue SE to Rainbow Baptist Church, 1.1 mile. TLD is located on fence post at West end of rock fence in front of Church, just as road intersects and turns left.

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<p><u>ATTACHMENT 4</u> <u>PAGE 5 OF 7</u></p>		
<p><u>SAMPLE LOCATION</u> <u>SECTOR-MI/DIRECT</u></p>	<p><u>LOCATION DESCRIPTION</u></p>	
<p>SE-4.6</p>	<p>Continue on County Road 200 to Hwy. 67 and turn right. Continue to intersection of Hwy. 67 and Hwy. 144, 1 mile. TLD is located on fence by telephone pole at NE corner of intersection where fence line is closest to Hwy. 144.</p>	
<p>SE-3.85</p>	<p>Go North on Hwy. 144 1 mile to County Road on West, left side of Hwy. 144. Three drives go up side of hill from this intersection. Take North or 3rd drive. There will be a mobile home on left, yellow house on right, and another mobile home further up hill. TLD is on telephone pole with transformer at top of hill by brown and tan mobile home.</p>	
<p>SSE-4.4</p>	<p>Double back to Hwy. 67 and continue to Glen Rose. 2.0 miles from intersection of Hwy. 67 and Hwy. 144, just as you enter Glen Rose, you will see a sign on right side of road that reads "Hico - Stephenville." There is an Air Monitoring Station by this sign. TLD is located in Air Station.</p>	
<p>W-2</p>	<p>Return to Plant Entrance and continue North on County Road 201 to first County Road, .01 mile, which is old County Road 201. Take this road and cross railroad track. TLD is located in Air Monitoring Station on left.</p>	
<p>WNW-1</p>	<p>From Administration building, proceed towards main entrance and turn right on road to Brown and Root parking lot or second road to right after Guard Gate. Take a left at next road after you cross railroad tracks, which is next to fence; proceed down fence until you come to pedestrian gate. TLD is located next to gate.</p>	
<p>W-1</p>	<p>Return to plant entrance road and turn right. Maintenance road is next road on left; take a left here. TLD is 0.1 mile from gate on left side of road in tree.</p>	

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<p><u>SAMPLE LOCATION</u> <u>SECTOR-MI/DIRECT</u></p>	<p><u>LOCATION DESCRIPTION</u></p>	
<p>WSW-1</p>	<p>Continue on maintenance road; successive TLD's are as listed.</p> <p>WSW-1 is 0.7 mile from W-1 on right side of road on fence.</p> <p>SW-0.9 is 0.4 mile from WSW-1 on right side of road in tree.</p> <p>SSW-1 is 0.5 mile from SW-0.9 on right side of road on fence.</p> <p>S-1.5 is 0.5 mile from SSW-1 on right side of road on fence.</p> <p>SSE-1.3 is 0.4 mile from S-1.5 on right side of road in tree.</p> <p>SE-1.3 is 0.6 mile from SSE-1.3 on left side of road in tree.</p> <p>ESE-1.4 is 0.5 mile from SE-1.3 on left side of road in tree.</p>	
<p>E-1.9</p>	<p>Continue across dam and TLD is on wooden bench marker at NE end of dam, 0.8 mile.</p>	
<p>ENE-2.5</p>	<p>Continue on maintenance road to left and cross Emergency Spillway. TLD is located on left side of road in tree 0.2 mile from end of Emergency Spillway or 0.7 mile from E-1.9.</p>	
<p>NE-1.7 and NNE-1.1</p>	<p>OBTAIN USE OF BOAT TO PLACE THESE TLD'S</p> <p>Obtain map with locations marked. Proceed to the areas marked on map. Location direction can be checked against relationship by direction with Containment Buildings. TLD's are located above water line about 6'; may be 30 to 75 feet from edge of water.</p>	

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SAMPLE LOCATION
SECTOR-MI/DIRECT

LOCATION DESCRIPTION

NNW-1.35

This TLD is located on an island. Approach with large boat must be made from NW side of island. Small flat bottom boat can be beached anywhere. TLD is located on SE or Plant side of island. Take note that an old rock farm house is only a few feet under water on the SE side of island. Do not ruin a boat motor or boat bottom on it.

NW-1

There is an old road SSW of island. It can be seen better as you approach the area. A large dead oak tree is by the road in the lake. TLD is located on right side of old road, back from the water line in a tree.

ATTACHMENT 5
PAGE 1 OF 1

RADIOLOGICAL RESPONSE FIELD KIT CONTENTS

1 DOSE RATE INSTRUMENT	50 GLOVE LINERS
1 COUNT RATE INSTRUMENT	2 BOX DISPOSABLE GLOVES
1 PANCAKE BETA/GAMMA DETECTOR	5 PR. DISPOSABLE SHOE COVERS
2 SPARE G.M. TUBES	2 CAPS
1 NAI DETECTOR	2 HOODS
1 PORTABLE M.C.A.	2 BETA/GAMMA TLD'S
2 FF RESPIRATOR W/O FILTER	2 LOW RANGE DOSIMETERS
2 PARTICULATE CANNISTERS	1 CHIRPER
2 SORBENT CANNISTERS	1 F.M. TRANSCEIVER
1 BOTTLE KI	1 SPARE BATTERY
1 AIR SAMPLER	10 MED. PLASTIC BAGS
5 SAMPLE HEADS	1 FOOT LOCKER
60 PARTICULATE SAMPLE FILTERS	1 ROLL MASKING TAPE
50 CHARCOAL FILTERS	1 ROLL DUCT TAPE
10 Ag X FILTERS	2 PORTABLE LIGHTS AND BATTERIES
2 COVERALLS - DISPOSABLE	MISC. RECORDS, PROCEDURES,
2 PLASTIC SUITS	AND OFFICE SUPPLIES
2 PR. SHOE COVERS	1 TOOL KIT
4 PR. RUBBER GLOVES	1 10-MILE E.P.Z. MAP

COMANCHE PEAK STEAM ELECTRIC STATION
EMERGENCY PLAN MANUAL

CONTROLLED COPY NO. 018

ON-SITE EMERGENCY RADIOLOGICAL SURVEYS

PROCEDURE NO. EPP-310

REVISION NO. 0

SAFETY-RELATED

SUBMITTED BY: B. T. Lemosta DATE: 9/2/82
RADIATION PROTECTION ENGINEER

APPROVED BY: R. L. Jones DATE: 9/29/82
MANAGER, PLANT OPERATIONS

<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE OCT 01 1982</p>	<p style="text-align: center;">PROCEDURE NO. EPP-310</p>
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<p>1.0 <u>Purpose</u></p> <p>The purpose of this procedure is to establish an on-site survey system to assess radiological conditions during an emergency.</p> <p>2.0 <u>Applicability</u></p> <p>This procedure is applicable to all emergency team members responsible for performing on-site radiological surveys during emergencies of Alert or higher classifications. This procedure becomes effective when issued.</p> <p>3.0 <u>Definitions</u></p> <p>3.1 <u>Emergency Response Facility</u> - The predetermined location from which instructions to emergency monitoring teams will originate, normally either the Control Room or the Technical Support Center.</p> <p>4.0 <u>Instructions</u></p> <p>4.1 <u>Precautions</u></p> <p>4.1.1 Emergency survey teams shall consist of a minimum of two persons, at least one of whom shall be a Radiation Protection Technician meeting ANSI N18.1 qualifications - who will be designated "Team Leader".</p> <p>4.1.2 Emergency survey teams shall maintain communications with the Emergency Response Facility (ERF) as appropriate.</p> <p>4.1.3 Surveys shall <u>not</u> be performed if the action would result in personnel exposure in excess of 10 CFR 20 limits.</p> <p>4.1.4 Individuals making surveys shall exercise caution to minimize their exposure and to limit the spread of contamination.</p> <p>4.1.5 All surveys shall be taken in accordance with Health Physics Technical Procedures unless otherwise instructed by the Technical Support Center Health Physicist (TSC-HP).</p> <p>4.1.6 Ensure the vehicle to be used for outside plant surveys is fully gassed and equipped with radio and appropriate radiological protection survey instruments and equipment.</p>		

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<p>4.1.7 Emergency survey team members should be briefed on emergency conditions and survey objectives, and should be aware of and discuss the following:</p> <p>4.1.7.1 Current area radiation monitoring system (ARMS) remote readouts for the areas of concern.</p> <p>4.1.7.2 On-going accident related processes or reactions, i.e. unchecked leaks, steam leaks, unusual sources of high radiation, etc.</p> <p>4.1.7.3 Physical safeguards which may not be functioning.</p> <p>4.1.7.4 Equipment needed from the emergency kits located in the Control Room, Technical Support Center (TSC), and Operations Support Center (OSC).</p> <p>4.1.7.5 Additional equipment needs, i.e. keys, bolt cutters, flashlights, rope, insulated gloves, radios, etc.</p> <p>4.1.7.6 Current wind direction which dictates, to out-of-plant survey teams, the primary direction of emphasis during plant releases. Wind direction may be obtained from meteorological computer output, and is given as the direction from which the wind is blowing.</p> <p>Attachment 1, On-site Monitoring Locations, is a site map with sixteen 22.5° sectors. Generally, the affected areas will include the sector directly downwind, and the sectors on either side of the downwind sector.</p>		
<p>4.2 <u>Immediate Actions</u></p>		
<p>4.2.1 Immediately upon notification of the emergency condition (Alert classification or higher) response personnel shall assemble in the Operations Support Center (OSC) or appropriate designated location.</p>		
<p>4.2.2 The Technical Support Center Health Physicist (TSC-HP) or his designee shall assign survey priorities as required by the Radiological Protection</p>		

IMAGE EVALUATION
TEST TARGET (Mİ-3)

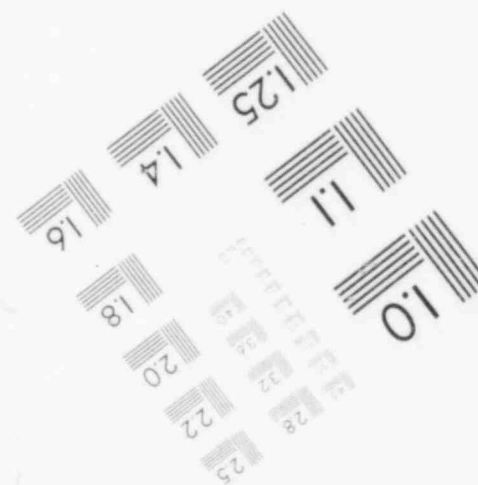
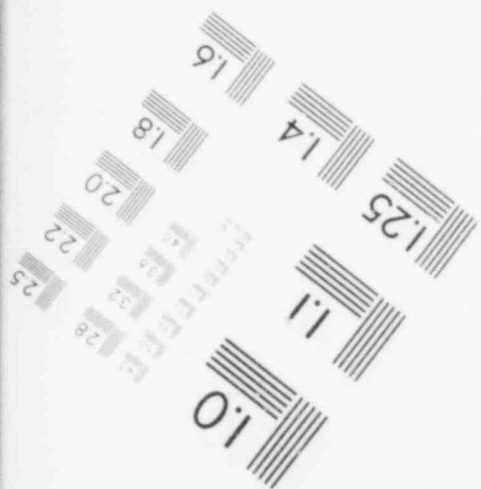
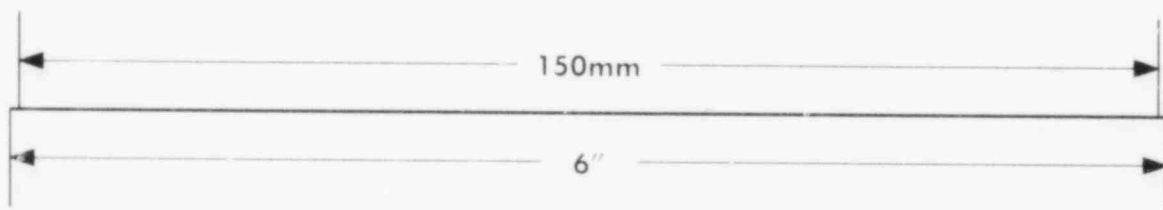
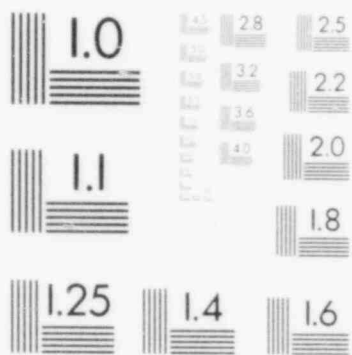
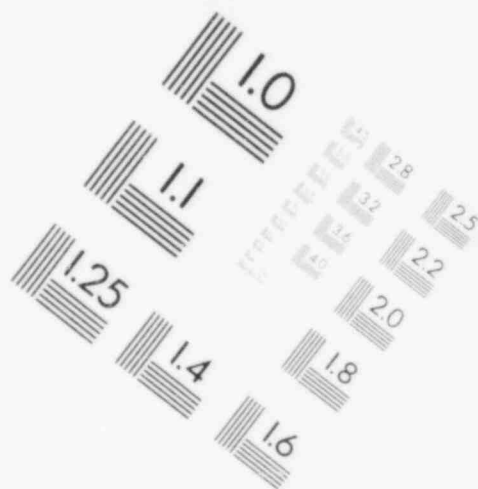
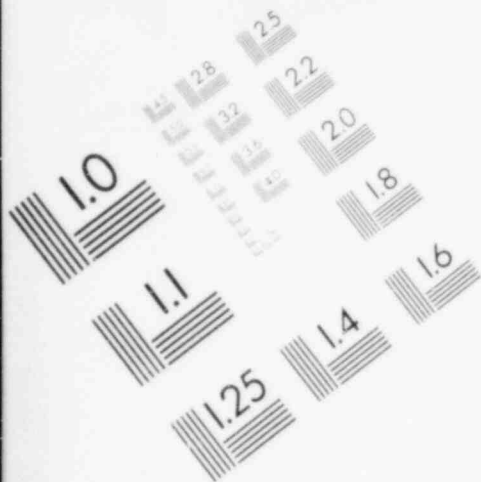
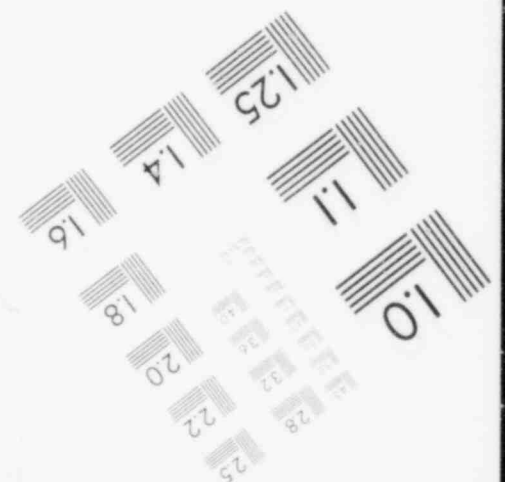
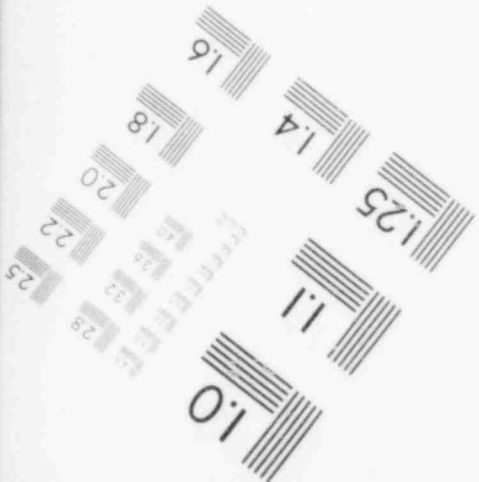
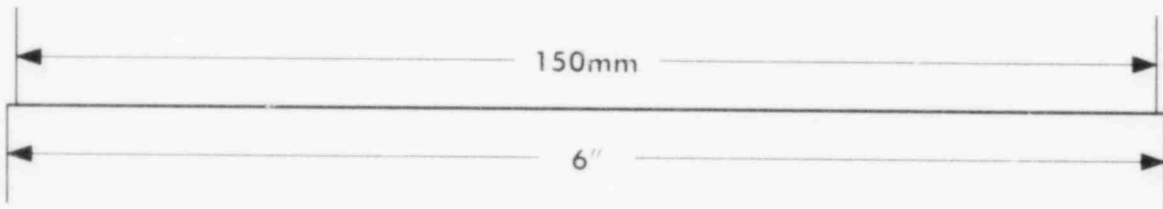
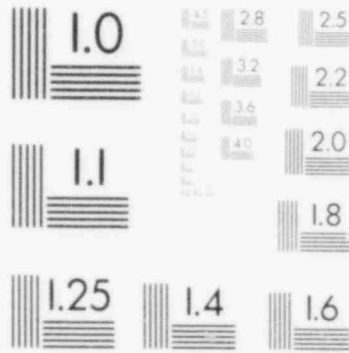
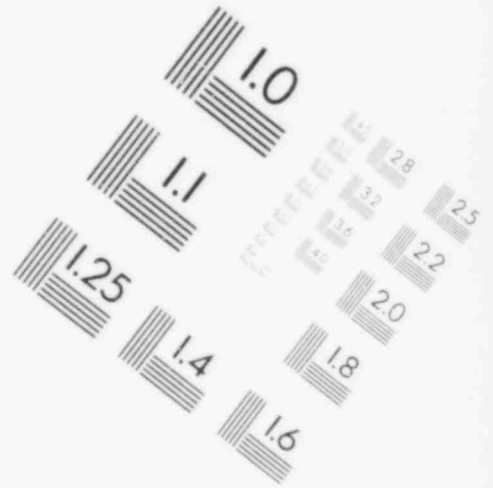
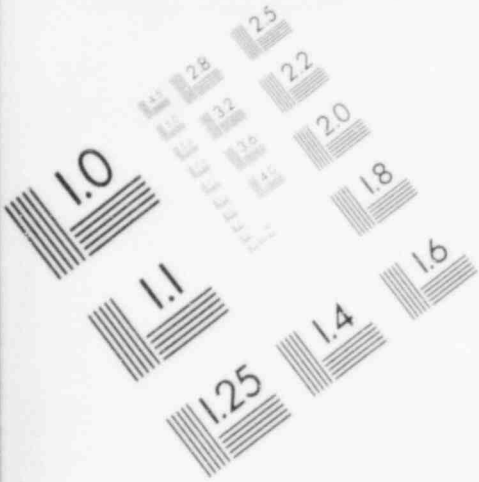


IMAGE EVALUATION
TEST TARGET (MT-3)



<p style="text-align: center;">CPSES EMERGENCY PLAN MANUAL</p>	<p style="text-align: center;">ISSUE DATE OCT 01 1982</p>	<p style="text-align: center;">PROCEDURE NO. EPP-310</p>
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<p>Coordinator (RPC) or as conditions warrant. In the absence of the RPC or TSC-HP, the Emergency Coordinator (EC) shall assign priorities and brief the emergency survey team on conditions and survey requirements.</p> <p>4.2.3 On-site survey team members shall obtain the necessary survey equipment from the Radiation Protection office or applicable emergency equipment storage locker.</p> <p>Note: Personnel monitoring dosimetry equipment shall be worn by all emergency survey team members.</p> <p>4.2.4 On-site surveys shall consist of radiation dose rates, surface contamination, and airborne radioactivity (particulate, gas and iodine) levels.</p> <p>4.2.4.1 Form HPT-602-1 "Health Physics Smear Sampling and Radiation Survey Data Sheet" and accompanying map, as appropriate, shall be annotated with survey results and corresponding map locations for all radiation and contamination surveys taken. Data sheet headings shall be complete, including time, date, instrument type and number, signature of technician, and any unusual anomalies or inaccessible areas noted.</p> <p>4.2.4.2 Airborne radioactivity samples shall be obtained using particulate filters and silver zeolite or charcoal cartridge, as directed by the TSC-HP or his designee. Each sample shall be identified with sample location, time on/off, date, flow rate and flow direction (on cartridges), and shall be placed into sample envelope or bagged to prevent cross contamination.</p> <p>Note: Air Samplers shall be adjusted for a flow rate of 2 cfm with particulate and silver zeolite or charcoal cartridge. Collect at least a 5-minute air sample (10 ft³). 30 - 50 ft³ (15 - 25 minutes) is preferred, but a 5-minute initial air sample per location is all that time allows.</p>		

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<p>4.2.4.3 Radiation surveys shall include both window open and window closed readings for those instruments with windows or beta shields. Record beta-factor for the instrument used.</p> <p><u>Note:</u> Perform a radiation survey of emergency air samples to identify those which may be unusually high and require shielding or special handling.</p> <p>4.2.5 Communications with the TSC shall be as follows:</p> <p>4.2.5.1 Gai-tronics or sound-powered telephone for In-plant survey teams.</p> <p>4.2.5.2 Radio, mobile or portable 'hand-held', for Out-of-plant survey teams (Primary), and telephone (Backup).</p> <p>4.2.6 In-plant survey team members shall log into the restricted area on an Emergency Access Permit; entering name, badge number, and initial dosimetry reading, as specified in HPA-112, Radiation Work Permits, paragraph 4.3.3.</p> <p><u>Note:</u> Prior to entry into plant areas the survey team leader shall contact the TSC-HP and verify conditions and priorities.</p> <p>4.2.6.1 Survey appropriate areas and locations specified by the TSC-HP to determine and post 100 mrem/hr general area lines not previously identified. The survey team should not proceed until dose rate information is reported to the TSC-HP and authorization to proceed has been granted by the TSC-HP, RPC, or EC.</p> <p>4.2.6.2 With proper authorization, as specified in 4.2.6.1 above, the emergency survey team shall proceed quickly to the specified survey locations, or until a 1000 mrem/hr general area line has been reached, then return to a low dose area to communicate survey results and observations to the TSC-HP.</p> <p>4.2.7 Outside-plant survey team leader shall radio-check the TSC from the vehicle prior to traveling to the</p>		

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<p>perimeter survey location directed by the TSC-HP. (Attachment 1)</p> <p>The TSC will use fixed monitor readings and in-plant survey information to provide insight as to the out-of-plant situations which might be encountered.</p> <p>4.2.7.1 When traveling from one survey location to another a radiation detection instrument shall be turned "ON" to permit recognition of plume traversal.</p> <p>4.2.7.2 Whenever radiation levels "above background" are first encountered, measurements will be taken, data recorded, and information transmitted to the TSC.</p> <p>4.2.7.3 Post out-of-plant areas when possible, to identify radiation, contamination, and airborne radioactivity areas encountered.</p> <p>4.2.8 Immediately upon completion of surveys, in-plant and out-of-plant, smears and air samples shall be counted, results relayed to the TSC-HP, and survey forms completed.</p> <p>4.3 <u>Subsequent Actions</u></p> <p>4.3.1 Monitor the involved personnel and equipment for contamination, and decontaminate as necessary.</p> <p>4.3.2 Insure In-plant survey team members sign out on the appropriate RWP and document accumulated exposure.</p> <p>4.3.3 Deliver all completed survey forms to the TSC-HP for definitive analysis and evaluation.</p> <p>5.0 <u>References</u></p> <p>5.1 CPSES Emergency Plan, Section 2 and 7.3.</p> <p>5.2 CPSES General Health Physics Plan, Sections 5 and 6.</p> <p>5.3 HPA-112 "Radiation Work Permits"</p> <p>5.4 HPT-601 "Radiation Surveys"</p> <p>5.5 HPT-602 "Contamination Surveys"</p> <p>5.6 HPT-603 "Airborne Radioactivity Surveys"</p>		

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6.0 Attachments

6.1 Attachment 1, On-Site Monitoring Locations

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ON-SITE MONITORING LOCATIONS

