

COMANCHE PEAK STEAM ELECTRIC STATION

EMERGENCY PLAN MANUAL

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ACTIVATION OF THE
TECHNICAL SUPPORT CENTER (TSC)
AND
TSC PERSONNEL DUTIES

PROCEDURE NO. EPP-204

REVISION NO. 4

SAFETY-RELATED



SUBMITTED BY: *JL Gosdin*
SUPERINTENDENT, SUPPORT SERVICES

DATE: 9-10-85

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MANAGER, NUCLEAR OPERATIONS

DATE: 10-16-85

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1.0 Purpose

This procedure provides instructions for the activation of the Technical Support Center (TSC). This procedure also identifies the required actions, responsibilities, authorities and interfaces of those personnel assigned to the TSC.

2.0 Applicability

This procedure shall be initiated following the declaration of an Alert, a Site Area Emergency or General Emergency at CPSES. This procedure is applicable to the TSC Manager and his staff. During an emergency condition classified as a Notification of Unusual Event, the Emergency Coordinator at his discretion, may direct activation of the TSC.

This procedure becomes effective when issued.

3.0 Definitions

3.1 Technical Support Center - The TSC is the onsite emergency response facility located in close proximity to the Control Room that shall provide plant management and technical support to Control Room personnel during an emergency condition at CPSES. The TSC is equipped with technical data displays, plant records and other documents to assist TSC personnel in the detailed analysis and diagnosis of abnormal plant conditions and any releases of radioactivity to the environment. The TSC shall be the primary communications center for the plant during an emergency. At CPSES, the TSC is located in the classroom and office areas above the Control Room, at elevation 840'-6" of the Electrical and Control Building. The TSC is provided with the same habitability conditions as the Control Room. An example of the TSC layout for emergencies is illustrated in Attachment 2 to this procedure.

4.0 Instructions

4.1 Precautions

4.1.1 The names of personnel assigned specific duties and responsibilities according to this procedure are listed in EPP-203, "Emergency Communications". These individuals make up the nucleus of the CPSES emergency response. If required, emergency organization personnel may be supplemented under the provisions of procedures EPP-208 and EPP-209.

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17 4.2 Facility Activation

4.2.1 If conditions warrant activation of the TSC, either an Alert or higher class emergency or at the discretion of the Emergency Coordinator, the following shall be met in order to declare the facility operational:

4.2.1.1 Minimum staffing and function requirements:

- a. Management Representative - Facility Management
- b. Engineering Representative - Technical Evaluations
- c. Operations Representative - Operations Evaluations
- d. Maintenance Representative - Maintenance Functions
- e. Radiation Protection Representative - Radiological Evaluations
- f. TSC Communicator - Communications

4.2.1.2 Complete the TSC Checklist, Form EPP-204-1.

NOTE: Form EPP-204-1 should be used to document/verify proper staffing after shift changes.

4.2.1.3 Compliance with these conditions should not exceed sixty (60) minutes from the declaration of an Alert or higher class emergency.

4.3 Technical Support Center (TSC) Personnel Duties

4.3.1 Technical Support Center Manager

4.3.1.1 The individuals designated to assume this position upon activation of the TSC (in descending order of succession):

4.3.1.1.1 Manager, Plant Operations

4.3.1.1.2 Engineering Superintendent

4.3.1.1.3 Operations Superintendent

4.3.1.1.4 Maintenance Superintendent.

4.3.1.2 Responsibilities:

4.3.1.2.1 Contact the on-duty Shift Supervisor (Emergency Coordinator) to obtain

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<p>information regarding the plant status and the status of onsite and offsite emergency response activities.</p> <p>4.3.1.2.2 In addition to assuming the duties of the TSC Manager, assume duties of the Emergency Coordinator if the EOF has not been activated as specified in Procedure EPP-109, until such time as:</p> <ul style="list-style-type: none"> a. The event is closed out, or b. The Recovery Organization is formed (EPP-121), or c. The EOF Manager is prepared to accept the duties of the Emergency Coordinator. <p>4.3.1.2.3 Complete the TSC Checklist form EPP-204-1.</p> <p>4.3.1.2.4 Control access to the TSC. If additional personnel are needed for the facility, refer to procedure EPP-208, "Access Control During Emergency Conditions".</p> <p>4.3.1.2.5 Verify the activation of the Operations Support Center (OSC).</p> <p>4.3.1.2.6 Check notifications of State and local authorities and other agencies in accordance with EPP-203, "Emergency Notification".</p> <p>4.3.1.2.7 Assume control of the direction and coordination of all onsite activities conducted from the TSC, including:</p> <ul style="list-style-type: none"> a. The establishment of proper communications with the Control Room, OSC, EOF, and other emergency response facilities and coordination of all emergency response activities conducted within the Protected Area. b. The determination of the severity of the emergency conditions and 		

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<p>the current status of onsite emergency response activities.</p> <p>c. Review of key plant manipulations.</p> <p>4.3.1.2.8 Verify that all TSC emergency response functions are being performed.</p> <p>4.3.1.2.9 Relieve the Control Room personnel of any administrative functions and decisions that are not directly related to the safe shutdown of the station.</p> <p>4.3.1.2.10 Interface with the Onsite Radiological Assessment Coordinator to evaluate changes in plant status for potential offsite radiological consequences.</p> <p>4.3.1.2.11 Ensure coordination of activities conducted from the TSC with those activities conducted from the EOF.</p> <p>4.3.1.2.12 Interpret plant technical information as required.</p> <p>4.3.1.2.13 Initiate personnel rescue or emergency repair and damage control operations as appropriate.</p> <p>4.3.1.2.14 Provide input to the NRC representative stationed at the TSC regarding plant operating license requirements.</p> <p>4.3.2 Maintenance Coordinator</p> <p>4.3.2.1 The individuals designated to assume this position upon activation of the TSC are (in descending order of succession):</p> <p>4.3.2.1.1 Maintenance Superintendent</p> <p>4.3.2.1.2 Maintenance Engineer</p> <p>4.3.2.1.3 Electrical Maintenance Engineer.</p> <p>4.3.2.2 Responsibilities:</p> <p>4.3.2.3.2 Coordinate and direct emergency repair and damage control activities through</p>		

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the OSC Supervisor.

4.3.2.3.3 Advise the OSC Supervisor of any changes in plant conditions which may affect emergency repair and damage control activities.

4.3.2.2.4 Advise the TSC Manager and other TSC personnel regarding the status of onsite emergency repair and damage control activities.

4.3.3 Operations Coordinator

4.3.3.1 The individuals designated to assume this position upon the activation of the TSC are (in descending order of succession):

4.3.3.1.1 Operations Superintendent

4.3.3.1.2 Operations Engineer

4.3.3.1.3 Operations Supervisor.

4.3.3.2 Responsibilities:

4.3.3.3.1 Advise the TSC Manager and other TSC personnel regarding plant conditions and operational manipulations.

4.3.3.3.2 Evaluate the effects of proposed operational manipulations.

4.3.3.3.3 Coordinate with the Operations Advisor.

4.3.3.3.4 Interface with the Maintenance Coordinator and the Engineering Team Coordinator.

4.3.3.3.5 Ensure that the Operational Status Sheet, EPP-204-2 (Attachment 3), is completed in a timely manner, and establish and maintain a file of completed forms.

4.3.4 Engineering Team Coordinator

4.3.4.1 The individuals designated to assume this

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<div> <p>position upon the activation of the TSC are (in descending order of succession):</p> <p>4.3.4.1.1 Engineering Superintendent</p> <p>4.3.4.1.2 Results Engineering Supervisor</p> <p>4.3.4.2 Responsibilities:</p> <p>4.3.4.2.1 Direct and coordinate the efforts of the TSC Engineering Team.</p> <p>4.3.4.2.2 Verify that emergency response engineering support personnel with TSC assignments are in position or have been notified and are proceeding to the TSC.</p> <p>4.3.4.2.3 Advise the TSC Manager on technical matters relating to the NSSS, fuel integrity, plant systems and equipment, plant electrical systems and electrical systems and equipment, and plant instrumentation.</p> <p>4.3.4.2.4 Perform an independent assessment of critical plant parameters.</p> <p>4.3.4.2.5 Coordinate any TUGCO requests for technical assistance and support from within the Texas Utilities System or from outside organizations.</p> <p>4.3.4.2.6 Direct requests for outside assistance to Engineering Support Coordinator at the EOF when the EOF is activated.</p> <p>4.3.5 TSC Engineering Team</p> <p>4.3.5.1 The TSC Engineering Team shall be composed of four (4) members with general knowledge in the following areas:</p> <p>4.3.5.1.1 Mechanical Engineering</p> <p>4.3.5.1.2 Instrument and Controls Engineering</p> <p>4.3.5.1.3 Electrical Engineering</p> </div>		

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<div data-bbox="701 336 1166 372" data-label="Text"> <p>4.3.5.1.4 Nuclear Engineering</p> </div> <div data-bbox="701 404 1036 440" data-label="Text"> <p>4.3.5.1.5 Operations.</p> </div> <div data-bbox="540 472 971 508" data-label="Section-Header"> <p>4.3.5.2 Responsibilities:</p> </div> <div data-bbox="701 532 1474 634" data-label="Text"> <p><u>NOTE:</u> The responsibilities described may be performed by individuals or by the entire team.</p> </div> <div data-bbox="701 666 1344 729" data-label="Text"> <p>4.3.5.2.1 Trend and evaluate current and historical plant parameters.</p> </div> <div data-bbox="701 761 1445 825" data-label="Text"> <p>4.3.5.2.2 Assess the severity of the emergency conditions.</p> </div> <div data-bbox="701 857 1412 989" data-label="Text"> <p>4.3.5.2.3 Estimate time available to perform critical actions or before crucial parameters are exceeded or vital equipment is lost.</p> </div> <div data-bbox="701 1021 1477 1085" data-label="Text"> <p>4.3.5.2.4 Prepare plant trend data and formulate actions based on the trend data.</p> </div> <div data-bbox="701 1117 1445 1219" data-label="Text"> <p>4.3.5.2.5 Recommend corrective or preventative actions to the Engineering Team Coordinator.</p> </div> <div data-bbox="701 1251 1477 1353" data-label="Text"> <p>4.3.5.2.6 Provide time estimates for the performances of repair activities to place vital equipment back in service.</p> </div> <div data-bbox="701 1385 1477 1487" data-label="Text"> <p>4.3.5.2.7 Provide Engineering Support to Control Room and TSC Emergency Organization Groups.</p> </div> <div data-bbox="701 1519 1445 1651" data-label="Text"> <p>4.3.5.2.8 As appropriate, prepare messages for the Nuclear Network System and transmit the messages to the Nuclear Network operator at the EOF.</p> </div> <div data-bbox="443 1683 1222 1719" data-label="Section-Header"> <p>4.3.6 Onsite Radiological Assessment Coordinator</p> </div> <div data-bbox="557 1751 1466 1883" data-label="Text"> <p>4.3.6.1 The individual designated to assume this position upon activation of the TSC is a member of the Nuclear Operations or Plant Staff who is trained and has experience in Health Physics.</p> </div>		

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4.3.6.2 Responsibilities:

4.3.6.2.1 Initiate operation of the iodine monitor and area radiation monitor.

NOTE: If either monitor alarms or if it fails or is suspect, initiate the actions specified in Section 4.5.

4.3.6.2.2 Direct the issue and collection of additional dosimetry to TSC and Control Room personnel, if required.

4.3.6.2.3 Ensure the radiological safety of all emergency response personnel working within the Protected Area.

4.3.6.2.4 Coordinate the activities of the TSC Radiation Monitoring System (RMS) Computer Operators, Field Teams Communicator, Onsite Survey Teams Director and the Chemistry Supervisor at the OSC.

4.3.6.2.5 Direct and coordinate all radiological-related emergency response activities prior to the activation of the EOF.

4.3.6.2.6 Ensure that emergency sampling and radiological survey procedures are being properly implemented.

4.3.6.2.7 Review, and evaluate data concerning in-plant and on-site radiological conditions and distribute to the appropriate personnel as required.

4.3.6.2.8 Ensure that the in-plant use of protective clothing and respiratory protection, and access control measures are properly implemented.

4.3.6.2.9 Ensure that appropriate bioassay procedures have been implemented for onsite personnel.

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<div> <p>4.3.6.2.10 Ensure that personnel radiation exposures are maintained in accordance with CPSES administrative limits unless otherwise authorized by the Emergency Coordinator.</p> <p>4.3.6.2.11 Ensure that personnel are properly decontaminated, if necessary.</p> <p>4.3.6.2.12 Assist in planning personnel search and rescue operations, if necessary.</p> <p>4.3.6.2.13 Assist in the transfer of injured and non-essential personnel if radiation or contamination hazards are involved.</p> <p>4.3.6.2.14 Direct requests for additional support to the Radiation Protection Coordinator, or in his absence TSC Advisor, including any requests for:</p> <ol style="list-style-type: none"> Additional radiological monitoring equipment. Engineering evaluations of temporary shielding on special tools and equipment. Additional health physics support personnel. Additional instrumentation and equipment. <p>4.3.6.2.15 Advise and assist the Radiation Protection Coordinator on matters involving radiological safety.</p> <p>4.3.6.2.16 Maintain records of all onsite radiological emergency response activities.</p> <p>4.3.6.2.17 Ensure that the Radiological Status Sheet, EPP-204-3 (Attachment 4) is completed in a timely manner, and establish and maintain a file of completed forms.</p> </div>		

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<div data-bbox="685 342 1459 440"> <p>4.3.6.2.18 Maintain personnel dosimetry records for the duration of the emergency situation.</p> </div> <div data-bbox="418 474 1445 508"> <p>4.3.7 TSC Radiation Monitoring System (RMS) Computer Operators</p> </div> <div data-bbox="527 538 1393 670"> <p>4.3.7.1 The two TSC RMS Computer Operator positions shall be filled by individuals from the Radiation Protection Section or qualified contract personnel.</p> </div> <div data-bbox="527 702 969 736"> <p>4.3.7.2 Responsibilities:</p> </div> <div data-bbox="688 763 1477 861"> <p>4.3.7.2.1 Report directly to, and respond to requests from the Onsite Radiological Assessment Coordinator.</p> </div> <div data-bbox="688 893 1429 957"> <p>4.3.7.2.2 Calculate the projected onsite and offsite doses.</p> </div> <div data-bbox="688 991 1459 1089"> <p>4.3.7.2.3 Provide the completed dose projections to the Onsite Radiological Assessment Coordinator.</p> </div> <div data-bbox="688 1121 1466 1217"> <p>4.3.7.2.4 Obtain information regarding current and forecasted meteorological conditions.</p> </div> <div data-bbox="688 1251 1481 1381"> <p>4.3.7.2.5 Provide input as required for the timely completion of the Radiological Status Sheet EPP-204-3 (Attachment 4).</p> </div> <div data-bbox="422 1415 1153 1449"> <p>4.3.8 Technical Support Center (TSC) Advisor</p> </div> <div data-bbox="532 1478 1484 1610"> <p>4.3.8.1 The primary individual designated to assume this position upon activation of the TSC is the Results Engineer. The designated alternates are Engineers from the Results Engineering Section.</p> </div> <div data-bbox="532 1642 976 1676"> <p>4.3.8.2 Responsibilities:</p> </div> <div data-bbox="693 1706 1469 1806"> <p>4.3.8.2.1 Provide technical advice to the TSC Manager and other members of the TSC Staff as required.</p> </div> <div data-bbox="693 1836 1453 1970"> <p>4.3.8.2.2 Conduct and maintain accountability of TSC personnel in accordance with the procedure EPP-209, "Personnel Assembly and Accountability."</p> </div>		

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<div data-bbox="699 336 1479 1938"> <p>4.3.8.2.3 Coordinate warehouse support services.</p> <p>4.3.8.2.4 Direct and coordinate the activities of the following personnel:</p> <ul style="list-style-type: none"> a. TSC Communicator b. TSC Clerk c. TSC Events Recorder d. TSC Operational Status Recorder e. TSC Radiological Status Recorder <p>4.3.8.2.5 Ensure that adequate logistical support is provided both to the onsite and offsite emergency response and recovery efforts prior to the activation of the EOF. Such logistical support may include, but is not limited to, the following:</p> <ul style="list-style-type: none"> a. Additional clerical and administrative support personnel; b. Warehouse support, procurement and expediting services; c. Life-support services (e.g., food, clothing, and sleeping quarters) for onsite emergency personnel; and d. Additional communications support and equipment repair services. <p>4.3.8.2.6 Inform the Logistical Support Coordinator of any logistical activities, requests, etc. upon activation of the EOF.</p> <p>4.3.8.2.7 If the EOF has not been activated, verify the technical accuracy and adequacy of all public information releases prior to their dissemination to the news media.</p> </div>		

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<div data-bbox="695 342 1468 832"> <p>4.3.8.2.8 Inform the Public Information Coordinator of any news/information releases made prior to activation of the EOF.</p> <p>4.3.8.2.9 Conduct and record plant trend data analysis (i.e. indications of long term degradation of plant or situation outlooks getting better).</p> <p>4.3.8.2.10 Ensure that communications procedures are properly implemented, and that records of incoming and outgoing communications are maintained and prioritized.</p> </div> <div data-bbox="427 868 797 900"> <p>4.3.9 TSC Communicator</p> </div> <div data-bbox="537 927 1468 1315"> <p>4.3.9.1 The TSC Communicator position shall be filled by engineers or technicians trained in the responsibilities of the position.</p> <p>4.3.9.2 Responsibilities:</p> <p>4.3.9.2.1 Perform communications duties.</p> <p>4.3.9.2.2 Log all incoming and outgoing communications in accordance with EPP-202, "Emergency Communications", and EPP-203 "Emergency Notification".</p> </div> <div data-bbox="427 1353 688 1385"> <p>4.3.10 TSC Clerk</p> </div> <div data-bbox="537 1412 1468 1804"> <p>4.3.10.1 The TSC Clerk position shall be filled by Engineers or Technicians trained in the responsibilities of the position.</p> <p>4.3.10.2 Responsibilities:</p> <p>4.3.10.2.1 Perform clerical and administrative duties (e.g., distributing or posting information and copying documents).</p> <p>4.3.10.2.2 Assist and respond to any requests from the TSC Manager.</p> </div> <div data-bbox="427 1842 850 1874"> <p>4.3.11 TSC Events Recorder</p> </div> <div data-bbox="537 1902 1468 2002"> <p>4.3.11.1 The TSC Events Recorder position shall be filled by Engineers or Technicians trained in the responsibilities of the position.</p> </div>		

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4.3.11.2 Responsibilities:

4.3.11.2.1 Maintain a log of all pertinent emergency response activities occurring in the TSC.

4.3.11.2.2 Obtain information related to the emergency situation from TSC personnel.

4.3.11.2.3 Post information related to the emergency situation on the TSC Sequence of Events Board.

NOTE: The TSC Sequence of Events Board should list, in chronological order, only those event-type items related to the emergency situation. Operational and radiological data shall be posted on separate status boards.

4.3.12 TSC Operational Status Recorder

4.3.12.1 The TSC Operational Status Recorder position at the TSC shall be filled by Engineers or Technicians trained in the responsibilities of the position.

4.3.12.2 Responsibilities:

4.3.12.2.1 Complete the Operational Status Sheet EPP-204-2 (refer to Attachment 3), and maintain the Operational Status Board located in the TSC command center.

4.3.12.2.2 File the Operational Status Sheet.

4.3.12.2.3 Ensure that the EOF Operational Status Recorder is provided with the same information that appears on the status sheets.

4.3.12.2.4 Maintain communications with the Control Room Communicator.

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4.3.13 TSC Radiological Status Recorder

4.3.13.1 The TSC Radiological Status Recorder position in the TSC shall be filled by Engineers or Technicians trained in the responsibilities of the position.

4.3.13.2 Responsibilities:

4.3.13.2.1 Complete the Radiological Status Sheets (refer to Attachment 4), and maintain the Radiological Status Board located in the TSC command center.

4.3.13.2.2 File the Radiological Status Sheets.

4.3.13.2.3 Ensure that the EOF Radiological Status Recorder is provided with the same information that appears on the status sheets.

4.4 Subsequent Actions

4.4.1 In the event of extended operations, the TSC staff may be altered as necessary by the TSC Manager to maintain 24 hour operations capability.

4.4.2 Operation of the TSC shall continue until such time that the Emergency Coordinator or the Recovery Manager directs its deactivation.

4.4.3 Any records or forms generated by this procedure, as the result of an actual or potential emergency, shall be handled in accordance with STA-302, "Station Records".

4.5 Facility Habitability

4.5.1 If a habitability monitor alarms, the Onsite Radiological Assessment Coordinator (ORAC) shall direct a check of the current TSC radiological conditions. This check should be conducted as follows:

4.5.1.1 Using form EPP-309-1, determine and record the general Beta-Gamma dose rate in the TSC in accordance with EPP-310.

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<p data-bbox="532 342 1468 538">4.5.1.2 Replace the iodine cartridge on the portable iodine monitor and obtain one iodine concentration measurement based upon a 15 minute sampling period using the methodology described in HPI-863, "Operation of the Technical Associates Model FM-5ABNI Iodine Monitor."</p> <p data-bbox="690 572 1451 832"><u>NOTE:</u> All filters and iodine cartridges shall be labeled with the present date and time, total collection time, average sample flow rate and person performing the survey. These filters or cartridges shall be retained for future analysis. All results shall be documented and retained using HPI-863-1.</p> <p data-bbox="420 866 1419 959">4.5.2 If a habitability monitor fails or is suspect, the ORAC shall direct a check of the current TSC Radiological condition and commence periodic monitoring as follows:</p> <p data-bbox="532 993 1435 1087">4.5.2.1 Using form EPP-309-1, determine and record the general Beta-Gamma dose rate in the TSC in accordance with EPP-310.</p> <p data-bbox="532 1121 1419 1185">4.5.2.2 Determine the average iodine concentration in accordance with EPP-310.</p> <p data-bbox="532 1219 1451 1385">4.5.2.3 TSC habitability conditions should be periodically monitored. These checks should be performed as a minimum every hour while radioactive releases to the atmosphere are in progress.</p> <p data-bbox="420 1419 1468 1513">4.5.3 The ORAC shall notify the TSC Manager and take appropriate actions at the specific radiological conditions shown below:</p> <p data-bbox="532 1547 1451 1610">4.5.3.1 If the area dose rates exceed 10 mrem/hr but is less than 50 mrem/hr notify the TSC Manager.</p> <p data-bbox="532 1644 1386 1708">4.5.3.2 If the average iodine concentration exceeds $1.0E-8$ uCi/cc, notify the TSC Manager.</p> <p data-bbox="532 1742 1468 1908">4.5.3.3 If the area dose rate exceeds 50 mrem/hr, notify the TSC Manager. Continuously monitor dose rates using the ARM or other dose rate monitor until they drop below 50 mrem/hr, then resume normal monitoring.</p>		

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4.5.3.4 If the average iodine concentration exceeds $1.0\text{E-}7$ uCi/cc, notify the TSC Manager and continue to monitor iodine concentrations using the portable iodine monitor as described in HPI-863 or take portable air samples every 1/2 hour until concentrations drop below $1.0\text{E-}7$ uCi/cc, then resume normal monitoring.

4.5.4 Determine if protective actions are necessary:

4.5.4.1 If area dose rates exceed 100 mrem/hr, evacuation of the TSC to an alternate location should be considered.

4.5.4.2 If iodine concentrations exceed $1.0\text{E-}6$ uCi/cc, protective measures should be considered including evacuation to an alternate location, donning respiratory protection and taking KI in accordance with EPP-306, "Use of Thyroid Blocking Agents".

4.5.4.3 Protective action recommendations should take into account the estimated time which dose rates or iodine air concentrations will be at these high levels.

NOTE: The suggested iodine concentration for evacuation, $1.5\text{E-}5$ uCi/cc, is that concentration of I-131 that will give a total accumulated dose of 5 rem to the thyroid for a 1 hour inhalation period. This is passed on EPA graph 5.2 of EPA-520/1-75-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Accidents."

5.0 References

5.1 CPSES Emergency Plan

5.2 EPP-109, "Duties of the Emergency Coordinator"

5.3 EPP-202, "Emergency Communications"

5.4 EPP-203, "Emergency Notification"

5.5 EPP-208, "Access Control During Emergency Conditions"

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<div> <p>5.6 EPP-209, "Personnel Assembly & Accountability"</p> <p>5.7 EPP-306, "Use of Thyroid Blocking Agents"</p> <p>5.8 EPP-309, "Off-Site Radiological Surveys"</p> <p>5.9 EPP-310, "On-Site and In-Plant Radiological Surveys"</p> <p>5.10 EPP-520/1-75-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Accidents"</p> <p>5.11 HPT-801, "Operation of Portable Survey Instruments"</p> <p>5.12 HPI-863, "Operation of the Technical Associates Model FM-5ABNI Iodine Monitor"</p> <p>5.13 STA-302, "Station Records"</p> <p>6.0 <u>Attachments</u></p> <p>6.1 Attachment 1, "TSC Operations Checklist"</p> <p>6.2 Attachment 2, "Suggested TSC Layout"</p> <p>6.3 Attachment 3, "Operational Status Sheet"</p> <p>6.4 Attachment 4, "Radiological Status Sheet"</p> </div>		

ATTACHMENT 1
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TSC CHECKLIST

Texas Utilities Generating Company

Comanche Peak Steam Electric Station

TSC ACTIVATION CHECKLIST

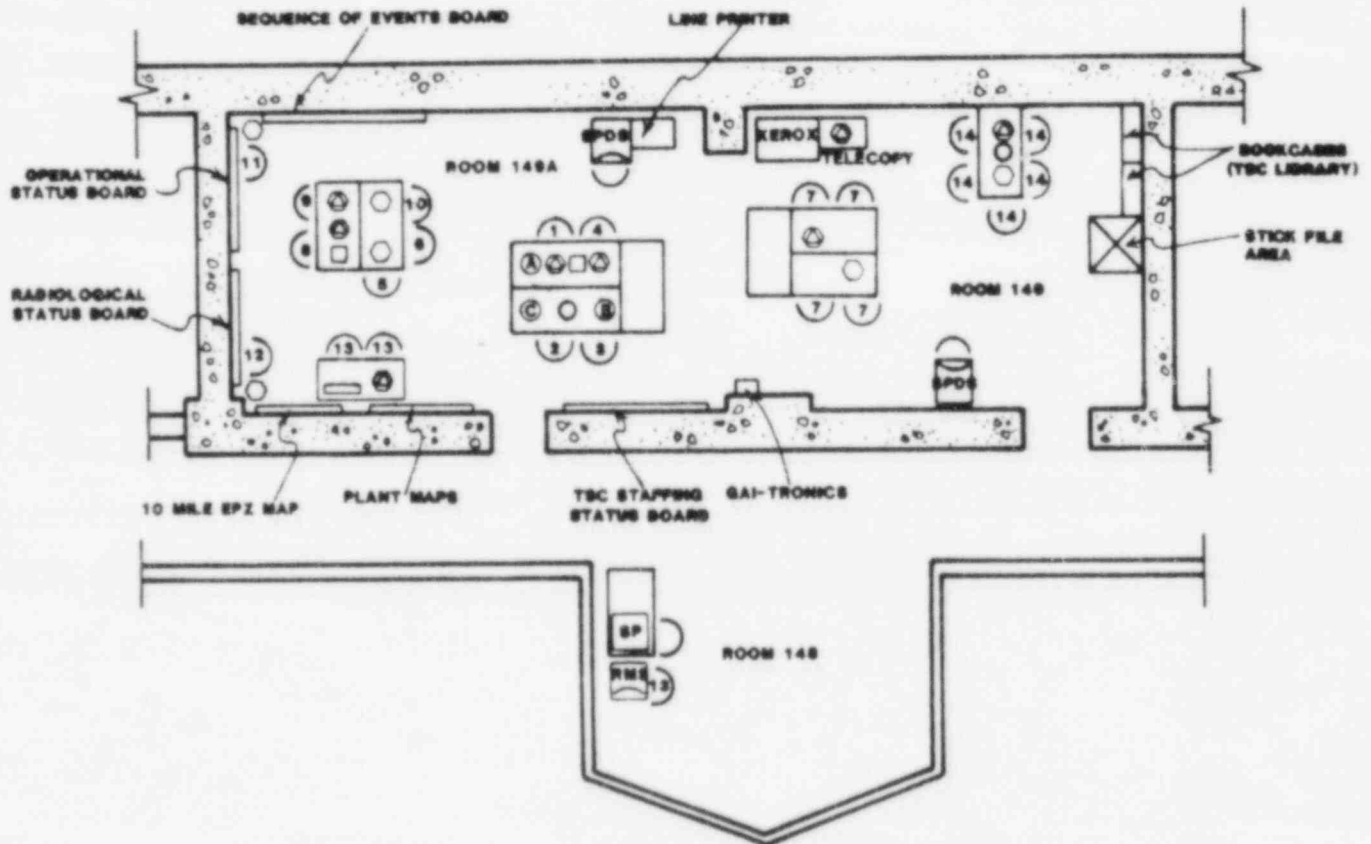
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ITEM	RESPONSIBILITY	VERIFIED OR COMPLETE
1. TSC activation/turnover Started _____ Date/Time _____		
2. TSC Layout (Attachment 2)	TSC Personnel	_____
3. TSC telephones installed (Attachment 2)	TSC Personnel	_____
4. Conduct TSC personnel accountability check report results to security.	TSC Manager	_____
5. Verify minimum staff requirement	TSC Advisor	_____
a. Management _____		
b. Engineering _____		
c. Operations _____		
d. Maintenance _____		
e. Radiation _____		
f. Protection _____		
TSC _____		
Communicator _____		
6. Establish communications per EPP-203	TSC Communicator	_____
7. Activate Iodine monitor and area radiation monitor	ORAC	_____
8. TSC checklist/turnover complete _____ Date/Time _____		

TSC Manager/Date _____

ATTACHMENT 2
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SUGGESTED TSC LAYOUT



TECHNICAL SUPPORT CENTER

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SUGGESTED TSC LAYOUT

- 1 TSC MANAGER
- 2 OPERATIONS COORDINATOR
- 3 MAINTENANCE COORDINATOR
- 4 ENGINEERING TEAM COORDINATOR
- 5 ONSITE RADIOLOGICAL ASSESSMENT COORDINATOR
- 6 TSC ADVISOR
- 7 TSC ENGINEERING TEAM
- 8 TSC COMMUNICATOR
- 9 TSC CLERK
- 10 TSC EVENTS RECORDER
- 11 OPERATIONAL STATUS RECORDER
- 12 RADIOLOGICAL STATUS RECORDER
- 13 RMS COMPUTER OPERATORS
- 14 NRC OR DRILL CONTROLLER

- ☐ PBX TELEPHONE
- ☒ PBX/TRUNK LINE TELEPHONE
- ☒ DEDICATED TELEPHONE TO EOF
- ☒ DEDICATED TELEPHONE TO OSC
- ☒ DEDICATED TELEPHONE TO CONTROL ROOM
- ☐ STATE AND COUNTY RINGDOWN LINE
- ☐ EMERGENCY NOTIFICATION SYSTEM TELEPHONE
- ☐ RADIO BASE STATION

☒ SPDS SAFETY PARAMETER DISPLAY SYSTEM
COMPUTER TERMINAL

☒ SP SCREEN PRINTER

☒ RMS RADIATION MONITORING SYSTEM
COMPUTER TERMINAL

ROOM 149 /149A

ATTACHMENT 3
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OPERATIONAL STATUS SHEET

Texas Utilities Generating Company
Comanche Peak Steam Electric Station

OPERATIONAL STATUS SHEET

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1. Affected Unit: One _____ Two _____

2. RCS

a. Pressure: _____ PSIG

b. Tavg: _____ °F

c. PRZR Level: _____ %

d. Est. RCS Leak: _____ GPM

e. RCP: _____ On _____ Off

f. T/C (Hi/Avg): _____ / _____ °F

g. C_B: _____ PPM

h. Loop Status: 1 2 3 4
 T_H _____ °F
 T_C _____ °F

3. ECCS

	<u>No. Pumps</u>	<u>Total GPM</u>
a. CC	_____	_____
b. RHR	_____	_____
c. SI	_____	_____
d. Cont. Spray	_____	_____
e. RWST Level:	_____	_____ %
f. Accumulators	1 2 3 4	
Accumulator Level	_____	_____ %
g. Accumulator Pres.	_____	_____ PSIG

4. Emergency Response Guidelines

a. Procedure: _____
b. Step: _____
c. Diagnosed Event: _____

ATTACHMENT 3
PAGE 2 OF 3

OPERATIONAL STATUS SHEET

Texas Utilities Generating Company
Comanche Peak Steam Electric Station

OPERATIONAL STATUS SHEET

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5. Critical Safety Functions

Time _____	Red	Orange	Yellow	Green
Sub Crit.	FRS-0.1	FRS-0.1	FRS-0.2	Sat
Core Cooling	FRC-0.1	FRC-0.2 FRC-0.3	FRC-0.4	Sat
RCS Integrity	FRP-0.1	FRP-0.1	FRP-0.2	Sat
Heat Sink	FRH-0.1	FRH-0.2 FRH-0.3	FRH-0.4 FRH-0.5	Sat
Containment	FRZ-0.1	FRZ-0.1 FRZ-0.2	FRZ-0.3	Sat
Inventory			FRI-0.1 FRI-0.2 FRI-0.3	Sat

6. Plant Status

- Rx Trip _____
- SI Actuation _____
- Containment Spray Actuation _____
- Power Level _____
- Comments _____

ATTACHMENT 3
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OPERATIONAL STATUS SHEET

Texas Utilities Generating Company
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OPERATIONAL STATUS SHEET

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7. Containment Conditions

- a. Pressure: _____ PSIG
b. Temperature: _____ °F
c. Humidity: _____ %
d. Rad. Level: _____ R/HR
e. Phase A Isolation: _____
f. Phase B Isolation: _____
g. Vent. Isolation: _____
h. Hydrogen Concentration: _____ % Volume

8. Steam Generators

- | | 1 | 2 | 3 | 4 | |
|---------------------|---------------|---------------|---------------|-------|------|
| a. Steam Generators | | | | | |
| b. SG Level: | _____ | _____ | _____ | _____ | % |
| c. SG Pressure: | _____ | _____ | _____ | _____ | PSIG |
| d. MSIV Status: | _____ | _____ | _____ | _____ | |
| e. AFW Flow: | _____ | _____ | _____ | _____ | GPM |
| f. AFW Pumps on: | Motor 1 _____ | Motor 2 _____ | Turbine _____ | | |
| g. CST Level: | _____ | _____ | _____ | _____ | % |

9. Support Systems

No. Pumps

- a. SSW Pumps Operating: _____
b. CCW Pumps Operating: _____
c. Emergency Bus Energized: Train A _____ Train B _____
d. Offsite Power: Yes _____ No _____
e. Diesel Gen. Available: No. 1 _____ No. 2 _____

10. Remarks:

Status Sheet Completed By _____
Date/Time _____

ATTACHMENT 4
PAGE 1 OF 2

RADIOLOGICAL STATUS SHEET

Texas Utilities Generating Company Comanche Peak Steam Electric Station RADIOLOGICAL STATUS SHEET				Page 1 of 2
TSC _____		EOF _____		
CURRENT AS OF: _____				
RELEASE INFORMATION:				
<input type="checkbox"/> Not Occurring <input type="checkbox"/> Not Projected <input type="checkbox"/> Is Occurring <input type="checkbox"/> Has Occurred	Time Began: _____ Time Ended: _____ Duration: _____ (Actual/Projected)	Release Path <input type="checkbox"/> Plant Vent <input type="checkbox"/> Steam Line <input type="checkbox"/> Containment Leak Other: _____		
Physical Form <input type="checkbox"/> Liquid <input type="checkbox"/> Gaseous Other: _____	<input type="checkbox"/> Waterborne <input type="checkbox"/> Airborne	Release Rate <input type="checkbox"/> Ci/sec N.G. <input type="checkbox"/> Ci/sec Iod. <input type="checkbox"/> Ci/sec Part.		
SURFACE CONTAMINATION:		TOTAL CONCENTRATION:		
Onsite <input type="checkbox"/> uCi/m ² _____ dpm/100 cm ² _____ Location _____ (highest)		<input type="checkbox"/> uCi/cc N.G. <input type="checkbox"/> uCi/cc Iod. <input type="checkbox"/> uCi/cc Part.		
Offsite (measured/projected) <input type="checkbox"/> uCi/m ² _____ Location _____ (highest)		Total Release: <input type="checkbox"/> Ci		
MONITORING TEAM INFORMATION:				
Team (A/1)*: Location: _____ Time of Survey: _____				
Rad. Level _____ mRem/hr Air. Cont. Level _____ uCi/m ³				
Team (B/2): Location: _____ Time of Survey: _____				
Rad. Level _____ mRem/hr Air. Cont. Level _____ uCi/m ³				
Team (C/3): Location: _____ Time of Survey: _____				
Rad. Level _____ mRem/hr Air. Cont. Level _____ uCi/m ³				
* Alpha Designator - Onsite Numeric Designator - Offsite				
<div style="display: flex; justify-content: space-between;"> rev/5-85 EPP-204-3 </div>				

ATTACHMENT 4
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RADIOLOGICAL STATUS SHEET

Texas Utilities Generating Company
Comanche Peak Steam Electric Station
RADIOLOGICAL STATUS SHEET

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METEOROLOGICAL INFORMATION:

Primary Tower _____ Backup Tower _____
Wind Speed _____ MPH; _____ MPS; From _____ °
Stability Class: _____ At _____ Off _____ Precip _____
Other Info: _____

RADIOLOGICAL DOSE INFORMATION:

Child Thyroid			Whole Body		
Dose Rate $\frac{\text{Rem}}{\text{Hr}}$	Dose (Rem)	Dist.	Dose Rate $\frac{\text{Rem}}{\text{Hr}}$	Dose (Rem)	
		PAB			
		2			
		5			
		10			

PROTECTIVE ACTION RECOMMENDATION:

_____ None at this time
_____ Shelter (S/D) _____ Zone _____
_____ Evacuate (S/G) _____ Zone _____
Basis: Radiation _____ Plant Conditions _____ Precautionary _____
Recommendations Implemented: Yes _____ No _____
If No, Actions Taken: _____

(Below Sections Apply to T.S.C. Status Board Only)

Primary Chemistry Results: Time Sample Taken _____
Total Activity: _____ uCi/cc; Boron: _____ PPM

IN-PLANT MONITOR DATA:

Monitor: _____ Location: _____ Reading: _____
_____ _____ (uCi/cc, _____
_____ _____ mR/hr): _____
_____ _____ _____

Status Sheet Completed by: _____ Date/Time _____