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EMERGENCY PLAN IMPLEMENTING PROCEDURE

EM-104

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

OPERATION OF THE
OPERATIONAL SUPPORT CENTER

APPROVED BY: Procedure Owner


(SIGNATURE ON FILE)

DATE:

8/18/00

PROCEDURE OWNER: Manager, Radiological
Emergency Planning

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1.0 **PURPOSE** [NOCS 1031]

- 1.1 Provide instructions for the activation and operation of the Operational Support Center (OSC).

Provide a point of assembly for emergency response teams assisting the Technical Support Center (TSC) in managing repair and monitoring activities during an emergency.

Provide planning, pre-job briefings and dispatch of emergency team personnel to areas evacuated during emergency conditions and areas where the radiological conditions are not well known.

1.2 **GENERAL INFORMATION**

- 1.2.1 The OSC is co-located at the bottom of the northeast corner of the berm with the TSC, and is activated whenever an Alert, Site Area Emergency, or General Emergency classification is declared.
- 1.2.2 The OSC receives direction from the TSC concerning activities and priorities.
- 1.2.3 Notification for activation of the OSC is by public address announcement, activation of the emergency group pagers and telephone notification, in accordance with EM-206. Enclosure 1 illustrates the layout for the OSC.
- 1.2.4 The Radiation Monitoring Teams, Sampling Team, Emergency Repair Team, Fire Protection, Procurement, engineering support and additional Operations personnel are based and operate from the OSC.
- 1.2.5 The OSC maintains full accountability for personnel dispatched from the OSC.
- 1.2.6 A Safety Assessment was performed for this procedure. A determination was made that this procedure is outside the scope of 10CFR50.59.

2.0 **DEVELOPMENTAL REFERENCES**

- 2.1 10CFR50.47, Emergency Plans
- 2.2 10CFR50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities
- 2.3 EM-102, Operation of the Technical Support Center
- 2.4 EM-206, Emergency Plan Roster Notification
- 2.5 EM-210A, Duties of the Radiation Monitoring Team: CR-3 and Generating Complex Personnel and Area Monitoring

- 2.6 EM-210B, Duties of the Radiation Monitoring Team: Environmental Sampling and Plume Tracking
- 2.7 HPP-409, Inventory and Availability of Emergency Supplies/Equipment
- 2.8 Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA-400-R-92-001, Environmental Protection Agency (October, 1996)
- 2.9 NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
- 2.10 Radiological Emergency Response Plan
- 2.11 RSP-600, ALARA Program

3.0 PERSONNEL INDOCTRINATION

3.1 DEFINITIONS

- 3.1.1 Activation - to provide notification to emergency response personnel of the need to respond to the OSC for staffing and operation.
- 3.1.2 Emergency Call Rosters - List of current qualified emergency team members. The Roster identifies qualified Emergency Repair Team, Sampling Team, Radiation Monitoring Team members and other qualified emergency responders.
- 3.1.3 Operational - OSC emergency team personnel available for dispatch.
- 3.1.4 Qualified - Successfully completed appropriate emergency team training and currently listed on Emergency Call Roster.
- 3.1.5 Re-entry - The return of personnel to an area evacuated during an emergency condition.
- 3.1.6 Self-Reading Dosimetry (SRD) - Personal Ion Chamber (PIC) or Electronic Alarming Dosimeter (EAD).
- 3.1.7 Team Leader - A qualified, emergency response member performing the lead responsibilities for a specific emergency team that has been dispatched.

3.2 RESPONSIBILITIES

3.2.1 OSC Manager - Maintenance Manager reporting to the TSC Repairs Coordinator by managing the OSC to:

- o Ensure OSC repair activities are performed in a safe and expeditious manner.
- o Coordinate with TSC staff to establish priorities for OSC activities and communicate results.
- o Maintain command and control of OSC activities.
- o Coordinate OSC dispatch efforts with appropriate OSC Coordinator as needed.
- o Perform duties as identified in Section 4.1.

3.2.2 OSC Maintenance Coordinator - Maintenance Supervisor or qualified Emergency Repair Team (ERT) member reporting to the OSC Manager to:

- o Perform duties as identified in Section 4.2.
- o Coordinate and plan maintenance emergency repair and dispatch efforts.
- o Provide technical and administrative direction for repair activities.
- o Assist in the planning for emergency repair team activities.
- o Maintain log of repair team activities.

3.2.3 OSC Health Physics Coordinator - Health Physics (HP) Supervisor or qualified Radiation Monitoring Team (RMT) member reporting to the Dose Assessment Coordinator to:

- o Perform duties as identified in Section 4.3.
- o Coordinate and plan RMT dispatch efforts and RMT support of other emergency response teams.
- o Report radiological information to the Dose Assessment Coordinator and update the OSC Manager on relevant radiological conditions and team status.
- o Ensure habitability surveys, radiological and non-radiological, are periodically performed in the TSC/OSC.
- o Direct the issue of dosimetry and protective equipment as required and track emergency exposure.
- o Ensure emergency teams are briefed on radiological conditions and limitations.
- o Provide technical and administrative direction to HP personnel.

- o Coordinate overall radiological control of RMT activities in accordance with EM-210A.
 - o Maintain log of significant RMT activities.
- 3.2.4 OSC Chemistry Coordinator - Chemistry Supervisor or qualified Sampling Team (ST) member reporting to the OSC Manager to:
- o Coordinate and plan Sampling Team dispatch efforts.
 - o Provide Chemistry information to the Dose Assessment Coordinator and updates to OSC Manager as needed.
 - o Provide technical and administrative support to Chemistry activities.
 - o Provide support to obtain liquid and gas samples for core damage assessments.
 - o Maintain log of ST activities.
 - o Perform duties as identified in Section 4.4.
- 3.2.5 Administrative Support - as requested by OSC Manager to:
- o Maintain OSC Tracking Board and provide team status to TSC.
 - o Provide administrative assistance to OSC Manager and OSC Coordinators as necessary.
- 3.2.6 Engineer - as requested by OSC Manager to:
- o Provide engineering support to OSC functions as needed. Call in engineers as needed.
- 3.2.7 Fire Assessment - Fire Protection Specialist reporting to the OSC Manager to:
- o Provide fire protection support relative to plant conditions and operations.
 - o Brief TSC and OSC staff on fire-related conditions.
 - o Maintain log of activities.
- 3.2.8 Operations - ERT qualified Operator reporting to the OSC Manager to:
- o Provide operator support for OSC and TSC activities.
 - o Perform duties as identified in Section 4.5.

- 3.2.9 Procurement - as requested by OSC Manager to:
- o Provide on-site material access and expediting.
 - o Procure parts, tools, and support needs which are not available on site and which are needed to support mitigation and repairs.
 - o Procure a hydrogen recombiner when requested. (Vendor-Rockwell International; FPC Manual # 1797; stored in Memphis, TN.)
- 3.2.10 Emergency Repair Team members repair equipment and facilities necessary to return the plant to safe condition.
- 3.2.11 Team Leaders perform team leader functions as identified on Enclosure 4.
- 3.2.12 Sampling Team members perform chemical or isotopic sampling and analysis as directed.
- 3.2.13 Radiation Monitoring Team member responsibilities and functions are identified in EM-210A and EM-210B.
- 3.2.14 Accident Assessment Coordinator - Located in TSC. Responsible for maintaining contact with the Control Room and developing strategies for accident mitigation. Reports to Emergency Coordinator.
- 3.2.15 Dose Assessment Coordinator - Located in the TSC. Responsible for updating and making recommendations to the Emergency Coordinator on radiological and chemistry-related activities. Reports to the Emergency Coordinator.
- 3.2.16 Emergency Coordinator - Located in the TSC. Responsible for overall coordination and direction of emergency response, authorizing exposure limits in excess of 5 REM TEDE. Reports to the EOF Director when EOF becomes operational.
- 3.2.17 Repairs Coordinator - Located in the TSC. Responsible for updating the Emergency Coordinator on repair team activities. Reports to the Emergency Coordinator.
- 3.2.18 Health Physics Department maintains inventory of emergency kits as identified in Section 3.4.1.
- 3.2.19 Nuclear Document Control maintains manuals, procedures, and drawings in the TSC/OSC.

3.3 LIMITS & PRECAUTIONS

- 3.3.1 OSC personnel follow the guidelines for exposure of emergency workers during re-entry activities as identified below or as stated on Emergency Team Authorization Form: [NOCS 3015]

Dose Limit Rem TEDE	Activity	Condition
5	All	
10	Prevent serious injury, protect valuable property, prevent catastrophic incident	
25	Life saving, protect large populations	
>25	Life saving, protect large populations	Voluntary > 45 years old, trained, and understand radiological health risks involved

- a. Health Physics personnel provide recommended courses of action to minimize exposure.
 - b. Any exposure in excess of 25 REM TEDE should be on a voluntary basis. To perform activities not addressed in the above Table, personnel exposure in excess of 5 REM TEDE may be authorized by the Emergency Coordinator with guidance from the Dose Assessment Coordinator.
 - c. During declared emergencies, emergency workers are allowed to receive up to 5 REM TEDE for duration of emergency regardless of normal exposure to date for the year.
- 3.3.2 There will be no re-entry into any emergency evacuated areas unless authorized by the EC or designee.
- 3.3.3 As a group, the team shall be knowledgeable in Radiation Protection procedures and should have capabilities in Operations and Maintenance.
- 3.3.4 Efforts to minimize exposure by ALARA practices shall be maintained.
- 3.3.5 For safety reasons, an emergency team dispatched from the OSC consists of at least two persons, one being a Radiation Monitoring Team member. The OSC Health Physics Coordinator may waive the RMT member requirement when radiological conditions warrant.
- 3.3.6 RMT members may be independently dispatched from the OSC to perform surveys.
- 3.3.7 Emergency team members must be qualified - listed on current Emergency Call Rosters.

- 3.3.8 Personnel shall not enter evacuated areas without portable survey instruments and personnel monitoring devices. Personnel accompanied by an RMT member are not required to carry portable survey equipment.
- 3.3.9 Emergency Operating Procedure (EOP) actions taken prior to the TSC being operational are not applicable under the guidance of EM-104.
- 3.3.10 The TSC/OSC ventilation system, when in the emergency recirculation mode, includes a minimum breathing air requirement to support 50 people. Monitoring of O_2 and CO_2 must take place when the TSC/OSC is in the emergency recirculation mode and occupancy exceeds 50.
- 3.3.11 IF an exposure of greater than 25 REM to the thyroid is expected, THEN consider the administration of KI as directed by TSC Medical Representative.
- 3.3.12 The TSC/OSC habitability boundary doors must be tightly closed when TSC/OSC is put into emergency recirculation mode.
- 3.3.13 Each emergency team member is to report to Dosimetry prior to re-entry to verify dose margin and upon completion of re-entry to update individual doses in the Radiological Data Management System (RDMS).

3.4 TSC/OSC EQUIPMENT AND SUPPLIES

3.4.1 Emergency Kits [NOCS 1126, 24200, 24290]

NOTE: HPP-409, identifies the contents of the following kits.

- a. TSC/OSC Emergency Kit
- b. Decontamination Kit
- c. Radiation Monitoring Team Emergency Kit
- d. Environmental Survey Kit (located in Survey Vehicle and Nuclear Security Operations Center)

3.4.2 Drawing/Procedure/Supply Files

Selected plant drawings, Plant Procedures and administrative supplies are contained in file cabinets located in the OSC Briefing Area. All other plant drawings are on aperture cards in the Dosimetry Room.

3.4.3 Equipment

- a. Commercial Telephone
- b. FPC Microwave System
- c. Public Address Exchange System (PAX)
- d. Portable Transceivers
- e. Sandpiper Pump (electric and manual)
- f. Portable Continuous Air Monitor
- g. Radiological Data Management System (RDMS)

4.0 INSTRUCTIONS

The steps under this section are not required to be performed in sequence.

Check the listing below for OSC position and refer to the designated section for instructions. Positions not listed perform job functions as needed to support OSC activities and as identified under responsibility section.

IF YOUR OSC POSITION IS:	REFER TO SECTION:
OSC Manager	4.1
OSC Maintenance Coordinator	4.2
OSC Health Physics Coordinator	4.3
OSC Chemistry Coordinator	4.4
OSC Operations Personnel	4.5
Emergency Team Members	4.6
Emergency Team Leader	Enclosure 4

4.1 OSC MANAGER

4.1.1 Activation

- 4.1.1.1 TAKE plant radio to OSC, if possible.
- 4.1.1.2 REPORT to the OSC upon the declaration of an Alert, Site Area or General Emergency.
- 4.1.1.3 BADGE-IN at TSC/OSC Card reader.

- 4.1.1.4 NOTIFY TSC Repair Coordinator of your arrival.
- 4.1.1.5 OBTAIN procedures as needed from Procedure file.
- 4.1.1.6 VERIFY operability of communication links to the TSC Repairs Coordinator.
- 4.1.1.7 REPORT equipment problems/readiness to the TSC Repair Coordinator.
- 4.1.1.8 The OSC is operational as soon as it is staffed with emergency team personnel available to support the TSC.

4.1.2 Operation

- 4.1.2.1 DETERMINE status of repair activities already in progress and NOTIFY TSC Repairs Coordinator of repair teams in the field.
- 4.1.2.2 PROVIDE advice to TSC Repairs Coordinator on plant repairs and corrective actions as appropriate, determining prioritization of repair activities with the TSC Repairs Coordinator.
- 4.1.2.3 COORDINATE repair activities already in progress with OSC Maintenance Coordinator and ensure RMT coverage is provided as needed.
- 4.1.2.4 COORDINATE Sampling Team (ST) activities already in progress with OSC Chemistry Coordinator and ensure RMT coverage is provided as needed.
- 4.1.2.5 ENSURE an Emergency Team Authorization (ETA) form (Enclosure 3) or equivalent is written for each emergency response team in the field.
- 4.1.2.6 APPROVE appropriate ETAs <5 REM prior to team dispatch. Consider having team members dressed out and dosimetry issued prior to need for dispatch.
- 4.1.2.7 INITIATE log of activities to document times and results of significant OSC activities. As a minimum include times of specific TSC requests and time and results provided back to TSC.
- 4.1.2.8 ENSURE OSC staff is augmented as needed, and appropriate team members dispatched to Control Room.
- 4.1.2.9 CONDUCT periodic briefings with OSC personnel to ensure awareness of plant conditions.
- 4.1.2.10 Upon request from the TSC for team dispatch, COORDINATE with appropriate OSC Coordinator and ensure the requested activity is planned consistent with directions from the TSC.
- 4.1.2.11 Once the activity is planned and the appropriate Team Leader identified, ENSURE pre-job briefings are held with Health Physics in accordance with Enclosure 4.

- 4.1.2.12 Coordinate OSC Operator dispatch with the Repairs Coordinator in the TSC to ensure the TSC Accident Assessment Coordinator is aware of dispatch.
- 4.1.2.12.1 IF Operations personnel are dispatched from the Control Room, instead of from the OSC,
THEN ensure they are informed of the pre-job briefing discussion.
- 4.1.2.13 ENSURE teams hold post-job briefings with respective coordinators as appropriate upon return to the OSC and the results are documented.
- 4.1.2.14 UPDATE the TSC Repairs Coordinator of OSC activities (Team dispatch, problems and activity results as appropriate)
- 4.1.2.15 COORDINATE a shift relief rotation for OSC personnel as appropriate.
- 4.1.2.16 ENSURE shift turnover is provided to the on-coming shift.
- 4.1.2.17 INITIATE OSC relocation in accordance with Enclosure 5 if requested by Emergency Coordinator or designee. [NOCS 24130]
- 4.1.2.18 ENSURE OSC Team Status Board is updated and information is provided to TSC.

4.1.3 Deactivation

- 4.1.3.1 DEACTIVATE the OSC, when directed by the Emergency Coordinator or designee.
- 4.1.3.2 RETURN equipment and supplies to storage.
- 4.1.3.3 ASSEMBLE logbooks and any other documentation generated during the emergency for collection by Radiological Emergency Planning personnel.

4.2 OSC MAINTENANCE COORDINATOR

4.2.1 Activation

- 4.2.1.1 REPORT to the OSC, with plant radio if possible, upon the declaration of an Alert, Site Area or General Emergency
- 4.2.1.2 BADGE-IN at TSC/OSC Card reader.
- 4.2.1.3 NOTIFY OSC Manager of your arrival.
- 4.2.1.4 OBTAIN Emergency Repair Team logbook, Valve locator books, system one line switching diagram, plant layout floor maps from file as needed.
- 4.2.1.5 IF emergency occurs during off hours, THEN ensure adequate number of qualified ERT members are notified and report to OSC. Refer to Emergency Team Roster located in file for qualified members.
- 4.2.1.6 UNLOCK tool boxes in OSC Team Room and the electric sandpiper pump located in decon shower. The key is located in file drawer.

4.2.2 Operation

NOTE: Evacuated maintenance personnel remaining on site may be reached by contacting the Main Assembly Area Supervisor.

- 4.2.2.1 IDENTIFY Emergency Repair Team (ERT) members working on emergency activities in the plant in support of the emergency to the OSC Manager, and ensure they are listed on a Emergency Team Authorization form (Enclosure 3).
- 4.2.2.2 VERIFY each ERT member is currently ERT qualified. (listed on ERT Emergency Call Roster)
- 4.2.2.3 ASSIGN an additional electrician, an I/C technician, and HVAC mechanic when available, to the Control Room. This group takes direction from the Nuclear Shift Manager for repairs within the Control Complex.
- 4.2.2.4 COORDINATE equipment repair priorities with OSC Manager.
- 4.2.2.5 IF it is necessary to become a Team Leader for a repair activity, THEN notify the OSC Manager of OSC Coordinator replacement OR appoint the OSC Manager to act on your behalf.
- 4.2.2.6 Upon request from the OSC Manager, IDENTIFY a Team Leader for the repair team activity and plan the repair.

- 4.2.2.7 ASSEMBLE appropriate team personnel and ensure a pre-job briefing is performed in accordance with Enclosure 4. The Team Leader may plan the repair and perform the pre-job briefing.
- 4.2.2.8 ENSURE emergency repair teams have proper procedures, tools, and protective equipment prior to entry into the plant.
- 4.2.2.9 DIRECT and control all ERT repairs outside the Control Complex.
- 4.2.2.10 IF it is determined that the TSC/OSC is to be put into emergency recirculation mode,
THEN ensure steps are taken in Enclosure 6.
- 4.2.2.11 ENSURE the Shower Holding Tank sump connections are established for processing of contaminated water, as needed. (See Enclosure 7 for guidance.)
- 4.2.2.12 IDENTIFY parts, tools, and support needs not available on-site to the Procurement Representative in the OSC.
- 4.2.2.13 CONSIDER heat stress and crew rotation needs to supplement manpower requirements.
- 4.2.2.14 ENSURE a post-job briefing is held and results of the repair are documented by the Team Leader for each emergency repair team upon return to the OSC.

4.3 OSC HEALTH PHYSICS COORDINATOR

4.3.1 Activation

- 4.3.1.1 REPORT to the OSC upon the declaration of an Alert, Site Area or General Emergency
- 4.3.1.2 BADGE-IN at TSC/OSC Card reader.
- 4.3.1.3 NOTIFY OSC Manager and Dose Assessment Coordinator of your arrival.
- 4.3.1.4 OBTAIN procedures as needed.
- 4.3.1.5 IF emergency occurs during off hours,
THEN ensure adequate number of qualified RMT members are notified and available to report to OSC. Refer to Emergency Team Roster located in file drawer.

4.3.2 Operation

NOTE: Evacuated Health Physics personnel remaining on site may be reached by contacting the Main Assembly Area Supervisor.

- 4.3.2.1 COORDINATE the initiation of an Emergency Radiation Work Permit (ERWP) with the Dose Assessment Coordinator and in accordance with Enclosure 8.
- 4.3.2.2 OBTAIN EC approval for ERWP.
- 4.3.2.3 LIST RMT members who will be performing surveys and monitoring activities up to 5 REM on a separate, approved ETA form and post until conditions warrant EC approval for > 5 REM (TEDE).
- 4.3.2.4 COORDINATE RMT members needed by other teams in the plant with OSC Manager. These may or may not include EOP actions, depending on the length of the EOP action.
- 4.3.2.5 VERIFY each RMT member is currently RMT qualified.
- 4.3.2.6 ENSURE periodic CO₂/O₂ sampling is initiated in accordance with EM-210A for the TSC/OSC, when required.
- 4.3.2.7 ESTABLISH controlled access into radiation areas as required by procedures.
- 4.3.2.8 ASSIGN an additional Health Physics Tech. to the Control Room to take direction from the Nuclear Shift Manager for repairs within the Control Complex.
- 4.3.2.9 ENSURE large OSC survey maps are updated as needed.

- 4.3.2.10 ENSURE items listed on Enclosure 1 of EM-210A, Radiation Monitoring Team Checklist, have been completed.
- 4.3.2.11 ENSURE TLDs are provided for all team members that report to the OSC and for teams already dispatched.
- 4.3.2.12 PROVIDE OSC Manager with periodic updates on radiological conditions.
- 4.3.2.13 Upon request from the TSC, IDENTIFY a Team Leader and plan identified monitoring or survey activity.
- 4.3.2.14 ASSEMBLE RMT personnel and ensure an appropriate pre-job briefing is held.
- 4.3.2.15 ENSURE a Emergency Team Authorization (ETA) form (Enclosure 3) is completed for each ERT, ST and Operation team dispatched.
- 4.3.2.15.1 IF Operators are not assigned to the TSC/OSC, THEN Operators dispatched from the Control Room, AND re-entry teams in need of an operator, MUST coordinate meeting place for briefing of the operator.
- 4.3.2.16 ASSIGN an RMT member for each re-entry, when conditions warrant, to assist in preparation and job coverage.
- 4.3.2.17 INFORM responding emergency team of current or changing radiological conditions affecting the team.
- 4.3.2.18 MAINTAIN awareness of OSC personnel radiation exposure status and inform Dose Assessment Coordinator of personnel approaching 5 REM (TEDE) exposure limits.
- 4.3.2.19 INFORM the Dose Assessment Coordinator if radiological conditions are such that Security personnel should prepare for suspension of safeguards in areas affected by radiological releases.
- 4.3.2.20 INFORM the Dose Assessment Coordinator if any team member's thyroid dose of 5 REM is reached. Update as needed until the magnitude of projected thyroid dose reaches 25 REM.
- 4.3.2.21 ISSUE KI, located in TSC cabinet, to OSC personnel when authorized.
- 4.3.2.22 Continuously UPDATE the Dose Assessment Coordinator of RMT activities and dose rate survey results. Document times of significant dose rate results.

4.4 OSC CHEMISTRY COORDINATOR

4.4.1 Activation

- 4.4.1.1 REPORT to the OSC and take a plant radio with you if possible, upon the declaration of an Alert, Site Area or General Emergency
- 4.4.1.2 BADGE-IN at TSC/OSC Card reader.
- 4.4.1.3 NOTIFY OSC Manager and Dose Assessment Coordinator of your arrival.
- 4.4.1.4 OBTAIN procedures as needed.
- 4.4.1.5 IF emergency occurs during off hours,
THEN ensure adequate number of qualified Sampling Team (ST) members are notified and report to OSC. Refer to Emergency Team Roster located in file drawer.

4.4.2 Operation

NOTE: Evacuated Chemistry personnel remaining on site may be reached by contacting the Main Assembly Area Supervisor.

- 4.4.2.1 IDENTIFY ST members in the plant supporting the emergency, to the OSC Manager and ensure they are listed on a Emergency Team Authorization (ETA) form (Enclosure 3).
- 4.4.2.2 VERIFY each ST member is currently ST qualified (listed on ST Emergency Call Roster).
- 4.4.2.3 COORDINATE dispatch of ST with OSC Manager.
- 4.4.2.4 ESTABLISH log of activities documenting time TSC requests chemistry samples, time sample pulled and time results given to TSC.
- 4.4.2.5 IF it is necessary to become Team Leader for Sampling Team,
THEN notify the OSC Manager of OSC Coordinator replacement,
OR appoint the OSC Manager to act as coordinator.
- 4.4.2.6 Upon request for Sampling Team, IDENTIFY a Team Leader and plan the activity.
- 4.4.2.7 ASSEMBLE appropriate team personnel and ensure a pre-job briefing is performed in accordance with Enclosure 4.
- 4.4.2.8 PROVIDE technical and administrative support to Chemistry activities
- 4.4.2.9 ENSURE the ST continues to perform chemical or radiological liquid and gas samples for core damage assessments as requested.

- 4.4.2.10 MAINTAIN communication with the Dose Assessment Coordinator, keeping him updated on ST activities as appropriate.
- 4.4.2.11 MAINTAIN contact with dispatched ST.
- 4.4.2.12 PROVIDE sample results to the TSC Dose Assessment Coordinator for core damage estimation and dose projection.
- 4.4.2.13 ENSURE a post-job briefing is held and sample results documented.

4.5 OPERATIONS PERSONNEL

4.5.1 Activation/Operation

NOTE: Operators assigned to the OSC are under the direction of the OSC Manager. The OSC Manager coordinates Operator actions through the TSC Repairs Coordinator to ensure the TSC Accident Assessment Coordinator is aware of the dispatch.

- 4.5.1.1 ERT qualified operators respond to the OSC during an Alert, Site Area Emergency and General Emergency as soon as available to support OSC re-entry and Control Room/Accident Assessment activities.**
- 4.5.1.2 NOTIFY the OSC Manager and Accident Assessment Coordinator of your arrival.**
- 4.5.1.3 COORDINATE operator activities with OSC Manager and ensure operators dispatched from the OSC are briefed in accordance with Enclosure 4 and follow instruction for Emergency Teams.**
- 4.5.1.4 When possible, MONITOR Accident Assessment Ring Down and provide updates of plant conditions to OSC Manager.**

4.6 EMERGENCY TEAM MEMBERS

4.6.1 Activation

- 4.6.1.1 Emergency team responders, unless pre-identified to report to an Emergency Facility, must report to appropriate Local Assembly Area during an Alert declaration. Upon assignment to respond as an emergency team member, report to the OSC.
- 4.6.1.2 REPORT directly to the OSC for assignment as an emergency team member upon the declaration of a Site Area or General Emergency.
- 4.6.1.3 BADGE-IN at TSC/OSC Card reader.
- 4.6.1.4 NOTIFY appropriate OSC Coordinator of your arrival.
- 4.6.1.5 REMAIN in OSC Team room until requested for emergency response.
- 4.6.1.6 FOLLOW instructions of respective OSC Coordinator or OSC Manager.

4.6.2 Operation

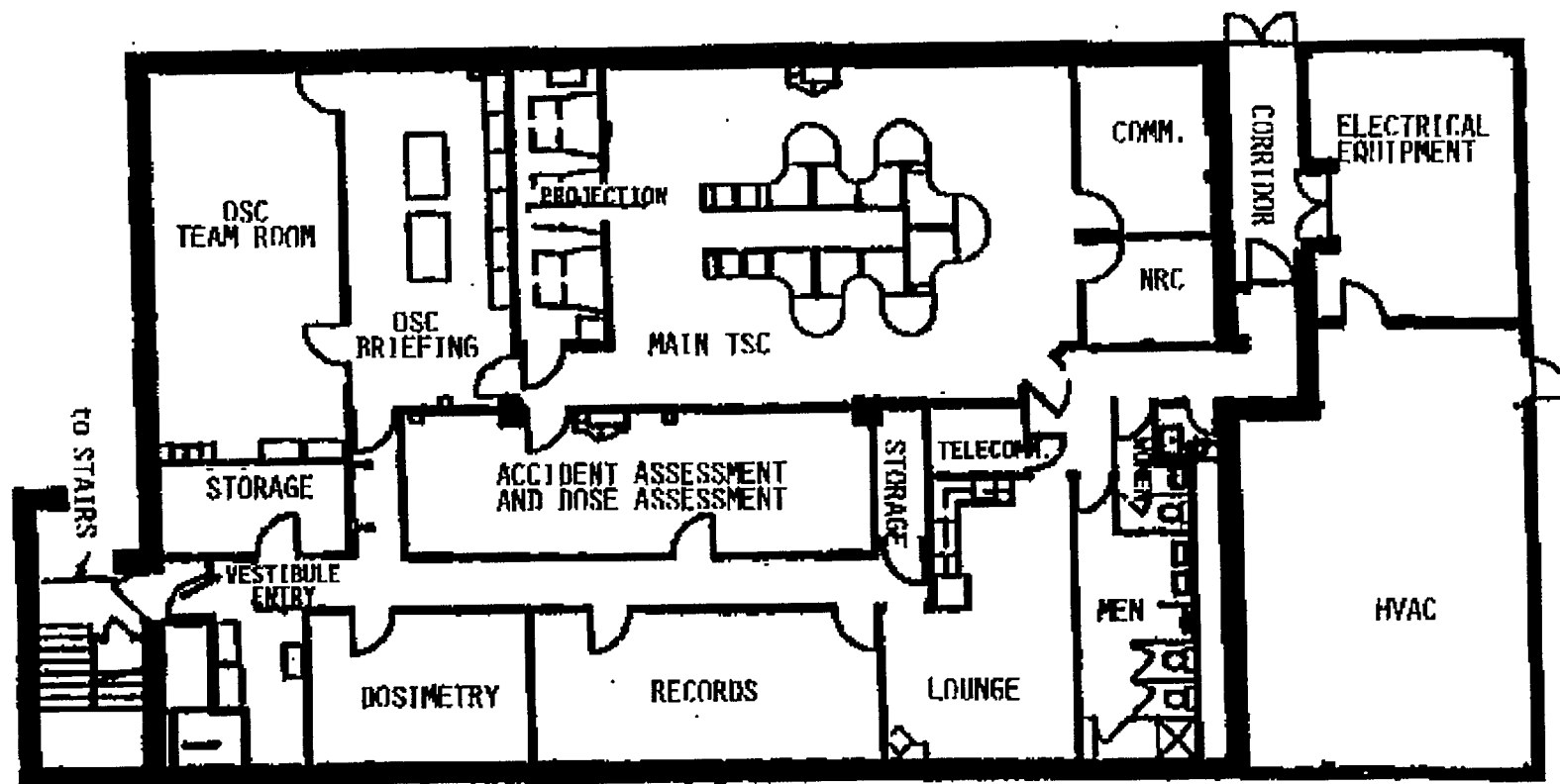
Upon formation of an emergency team, the following occurs:

- 4.6.2.1 The Radiation Monitoring Team members will:
 - o FILL OUT the Emergency Team Authorization form (Enclosure 3) in accordance with the requirements of the Emergency RWP (Enclosure 7) and any instructions stated on the pre-job briefing.
 - o ENSURE team members follow the instructions stated on the ERWP and ETA.
 - o REPORT any problem or hazard encountered along the route traveled or during the mission of that team.
 - o ABORT the re-entry if physical or radiological conditions deteriorate or exceed the limits set, or if communications are lost between the Team Leader and the OSC.
 - o ENSURE RDMS is updated upon return so team member dose records are updated.
 - o PERFORM radiological duties, as required, in accordance with EM-210A.

4.6.2.2 The responding emergency team will:

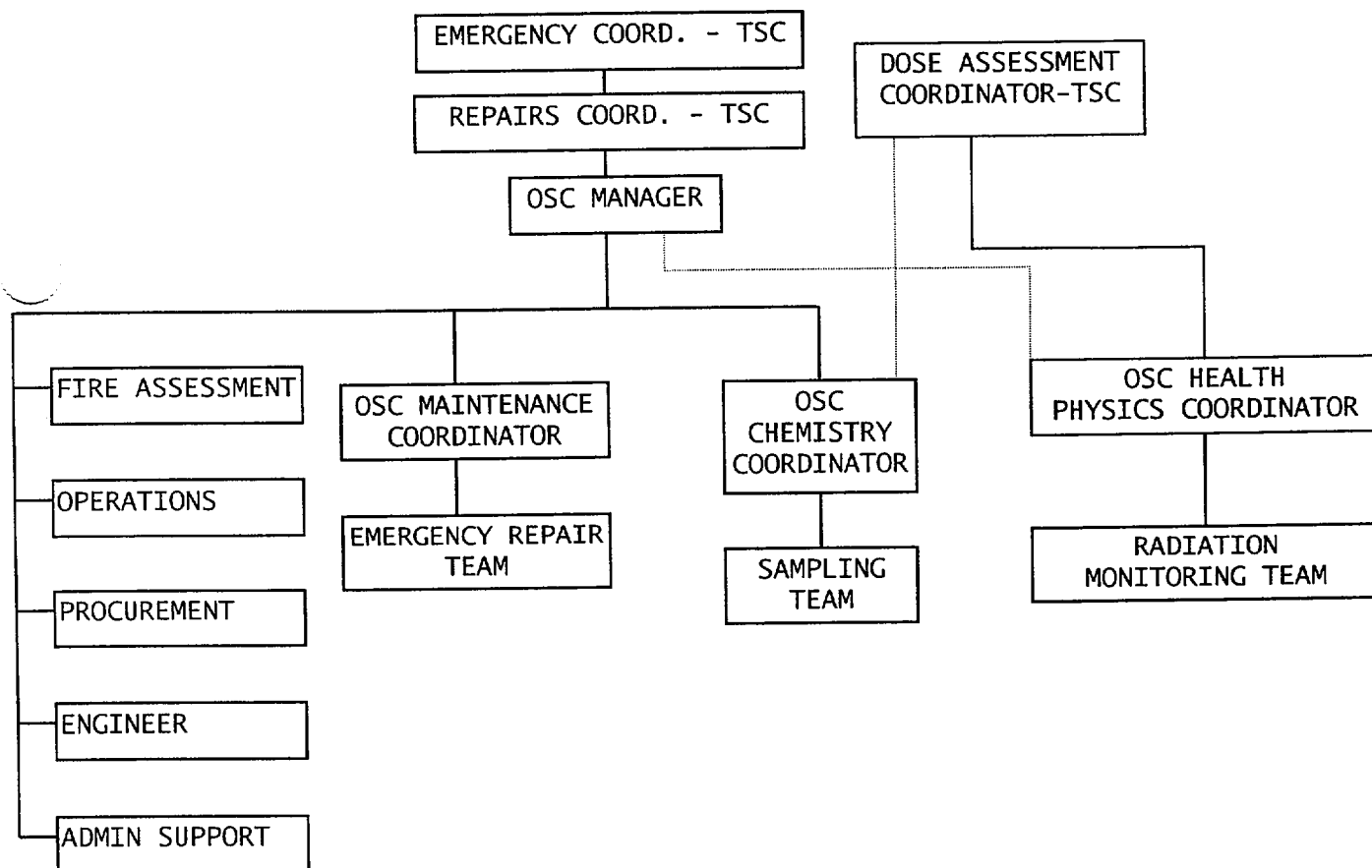
- o ATTEND pre-job briefing in accordance with Enclosure 4.
- o OBTAIN respiratory devices, dosimetry, protective clothing, and portable survey instruments required by the Emergency Team Authorization.
- o RE-ZERO dosimetry as needed.
- o PROCEED to designated area following the pre-determined route, observing all written and/or verbal precautions.
- o PERFORM designated work per written procedures or as discussed in pre-job briefing.
- o CONTINUOUSLY EVALUATE exposures during the re-entry.
- o Not deviate from the planned route unless required by unanticipated conditions, for a rescue, or to perform an activity which would minimize the emergency condition.
- o OBTAIN as much information as possible along the route, such as physical plant conditions, equipment damage or radiological data.
- o RETURN to point of departure via the same predetermined route taken above unless given other instructions.
- o RETURN to the OSC after completion of assigned tasks and follow the directions of the RMT member at the control point.
- o PERFORM post-job briefing with appropriate OSC Coordinator or OSC Manager, as time permits and ensure repair activities are documented.

LAYOUT OF TSC/OSC



OPERATIONAL SUPPORT CENTER RECOMMENDED STAFFING LEVELS

OSC Manager	1
OSC Health Physics Coordinator	1
OSC Chemistry Coordinator	1
OSC Maintenance Coordinator	1
Fire Assessment	1
Engineering Support (as needed)	1
Administrative Support	1
Procurement	1
Radiation Monitoring Team Members	10 (2-4 ESV)
Sampling Team	3
Emergency Repair Team (Elec, I/C, Mech)	7 (2 Elec, 2 I/C, 3 Mech)
Operators	2





SAMPLE EMERGENCY TEAM AUTHORIZATION

PE OF EMERGENCY TEAM DISPATCHED

DATE

TIME

REASON FOR ENTRY

RADIOLOGICAL CONDITIONS

INSTRUCTIONS FROM PRE-JOB BRIEFING

1) Team Leader must carry Radio

2) OSC Phone #

3)

EQUIPMENT USED

PROTECTIVE CLOTHING/EQUIPMENT

- ☐ None
☐ Standard PC's
☐ Double PC's
☐ Plastics
☐ Cloth/Paper

RESPIRATORY

- ☐ None
☐ SCBA
☐ Negative Pressure Respirator
☐ Particulate
☐ Sorbent

DOSIMETRY

- ☐ EAD: Setpoints: ____/____
☐ Low Range Dosimeter
☐ High Range Dosimeter
☐ TLD
☐ Multi-Badge
☐ Extremity

DOSE LIMIT FOR ENTRY

mREM *

DOSE ASSESSMENT COORDINATOR APPROVAL

EMERGENCY TEAM PERSONNEL

TLD#

TIME

IN

OUT

TEAM LEADER

TEAM MEMBERS

RE-ENTRY APPROVED/ EMERGENCY COORDINATOR OR DESIGNEE >5 REM (TEDE)
OSC MANAGER < 5 REM (TEDE)

DATE

TIME

* EMERGENCY DOSE LIMITS:
with a margin of 5 REM TEDE

During a declared emergency, each worker is allowed to begin

VOLUNTEER EMERGENCY DOSE LIMITS: 10 REM (TEDE) -
25 REM (TEDE) -
>25 REM (TEDE) -

Prevent injury, protect valuable property
Life saving, protect large populations
Life saving, should be trained volunteer
> 45 years of age

EMERGENCY TEAM AUTHORIZATION (ETA) GUIDANCE

A. Purpose

To authorize the dispatch of a designated team of personnel from the OSC for the performance of specific emergency related tasks, even if the Protected Area is not yet evacuated.

B. Contents

1. Type of team being authorized - Include type and number (ERT-2, ST-1, RMT-1)
2. Reason for entry - A brief description of why the designated team is dispatched.
3. Radiological Conditions - The anticipated conditions the team may encounter during the re-entry.
4. Instructions from Pre-Job Briefing - Include a brief description of the task the team is to perform.
5. Equipment used - Identify protective equipment to be used by personnel assigned to the team involved in the re-entry.
6. Dose limit for entry and approval - The Dose Assessment Coordinator approves the dose limit applicable to each of the team members. Because of the health risks associated with the dose limit, lifesaving missions should be undertaken by volunteers (healthy and above the age of 45) who have an understanding of the health risks and preferably by those whose normal duties have trained them for such missions.
7. Emergency Worker Exposure Calculation: IF no core melt, THEN TEDE = SRD Dose; IF core melt, THEN TEDE = SRD Dose times five.
8. Emergency Team Personnel - List team members assigned to re-entry and time re-entry starts (IN) and time of termination (OUT).
9. Re-entry Approval - Signed by the EC or Dose Assessment Coordinator if > 5 REM (TEDE) and may be delegated to the OSC Manager for < 5 REM (TEDE), designating that the re-entry for the team is authorized.

C. Development and Approval

1. After selecting team members, conduct a pre-job briefing, addressing such items as tools needed, scope of task, review of procedures applicable to task and assigning specific tasks that may increase the effectiveness and speed of the task completion (see Enclosure 4).
2. Meet with the RMT member assigned to re-entry. After filling out the ETA form up to and including the Equipment Used, the RMT member takes the ETA to the Dose Assessment Coordinator for Dose Limit approval.
3. Take form to the OSC Manager for entries < 5 REM (TEDE) or to the EC or his designee if > 5 REM (TEDE), who reviews and approves the re-entry to be conducted.
4. The ETA is updated to reflect time of team dispatch and posted for tracking. The copy should go in field with Team.
5. When the re-entry is completed, RDMS is updated with the dose accumulated for the team members. The ETA is updated to reflect the time the team exited the re-entry.
6. Subsequent team entries are made on separate ETAs.

TEAM BRIEFING/RE-ENTRY CHECKLIST

Re-entry is made for one of the following purposes:

- o Search for unaccounted personnel.
- o Perform monitoring, sampling, operations or repairs to minimize or eliminate the source of the emergency.
- o Perform the surveys needed to assess the radiological conditions and establish exclusion area boundaries.
- o Perform rescue operations.
- o Save property.

PRIOR TO DISPATCH

- ___ Ensure Team members have protective clothing, dosimetry, respiratory devices, and/or other protective equipment as specified by the Emergency Team Authorization (ETA) form.
- ___ Verify operability of survey instruments, radios and any other equipment needed prior to departure from OSC.
- ___ Ensure Self-Reading Dosimetry is re-zeroed as needed. Extremity TLDs are available in the TSC/OSC Emergency Kit.
- ___ Notify the OSC Manager the team is ready to depart.

PRE-JOB BRIEFING

The appropriate OSC Coordinator or designated Team Leader, in conjunction with Health Physics Coordinator, briefs the emergency team on the following:

- ___ The nature of the emergency and any other known hazards.
- ___ The purpose of the dispatch and the expected result.
- ___ Route the team will take back into the evacuated area.
- ___ Area dose rates (if known), amount of dose each team member may expect to receive based on hazards enroute and at emergency site
- ___ What actions should be taken if unanticipated conditions are encountered.

EMERGENCY TEAM LEADER FUNCTIONS:

- Understand the purpose of the re-entry and perform pre-job briefings as requested.
- IF suspension of safeguards has been invoked,
AND a key is necessary for entry into a locked area of the plant,
THEN obtain key from Control Room or TSC Security Coordinator.
- Report any condition or event within the scope of the teams training or experience which could minimize the effects of the emergency.
- Ensure the completion of the task for which the team was dispatched.
- Relay relevant plant conditions and significant actions taken by the team to the appropriate OSC Coordinator for logging.
- Coordinate returning equipment to service (opening or closing of valves, energizing components, etc.) directly with the Control Room.
- Inform Control Room of job completion when it affects plant equipment.
- Ensure all team members report to Dosimetry upon return to OSC to update individual doses in RDMS.
- Perform post-job briefing with appropriate OSC Coordinator or OSC Manager upon return.
- Document repair actions taken during re-entry to ensure adequate information for Work Request.

CONTINGENCY PLAN FOR SECURING OSC AND ESTABLISHING
AN ALTERNATE OSC
[NOCs 24130]

BEFORE GOING TO ALTERNATE LOCATION

- a. Identify minimum OSC staff necessary based on plant conditions. _____
- b. Consider taking items identified below. _____

OSC Tool Boxes
Radios
Emergency Kits or contents as needed
Any other items as determined by OSC Coordinators

STEPS TO SECURE OSC IF STORM SURGE IS EXPECTED

- a. Place high value items on tables:
 - Computers and peripherals _____
 - Communication equipment _____
 - Anything else that can be placed on tables _____
- b. Verify flood protection has been placed around TSC/OSC (EM-220). _____
- c. Ensure appropriate TSC equipment has been de-energized (EM-220, Enclosure 2). _____
- d. Disable auto start on diesel by selecting the "Auto/Test" switch to the center "Off" position on the generator Kohler Controller. _____

RELOCATE TO 124' ELEVATION OF THE CONTROL COMPLEX

ACTIVITY - Team Staging Area

PERSONNEL - Fire Brigade, Sampling Team, Emergency Repair Team, Radiation Monitoring Team, Security, OSC Manager, OSC Coordinators (as needed).

SETUP - may include chairs, tables and emergency kits as needed.

OPERATION - The OSC Manager remains on 124' elevation with emergency teams. He is assigned to the PAX phone to remain in communication with the Alternate TSC located outside the Control Room. Once a team is identified, a briefing occurs. OSC Coordinators are on the 124' elevation with teams.

PLACING TCS/OSC INTO EMERGENCY RECIRCULATION MODE
[NOCS 63008]

CAUTION: Activation of the emergency mode requires entry into potential
 Radiation Controlled Areas. Ensure a Radiation Monitoring Team
 member accompanies personnel performing this action.

ACTIVATION (See schematic on next page)

Perform the following actions from the HVAC room to activate the emergency recirculation mode for the TSC/OSC:

- _____ Open the access door for AHD-119.
- _____ At AH-229, rotate the switch from the "NORMAL(1)" to the "EMERGENCY(2)" position on the emergency mode control panel.
- _____ Verify the emergency recirculation mode by the following:
 - AHD-120 damper is in the emergency mode position. AHD-120 is located at waist level at the south side of the room.
 - AHF-62 fan is operational as indicated by a red light at the motor/starter panel on the southeast wall.
 - AHU-20 is operational as indicated by a red light at the motor/starter panel on the west wall.
 - AHF-60 fan is operational as indicated by a red light at the motor/starter panel in the middle of the room.
 - AHF-61 fan is operational as indicated by a red light at the motor/starter panel in the middle of the room.
- _____ IF the fans and dampers are not operational or in proper position, THEN notify the EC.

NOTE: Pliers may be needed on roof.

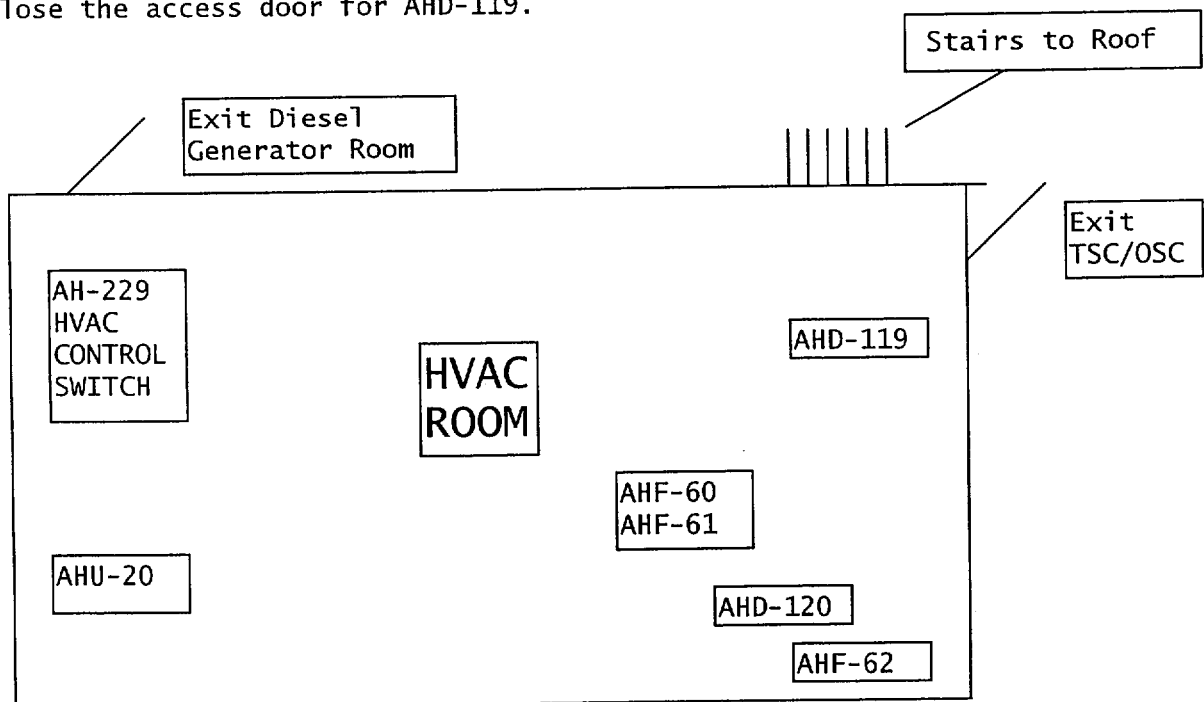
- _____ Exit TSC/OSC and proceed to roof over HVAC room.
- _____ Close and latch the goose neck for AHD-115, located on east side.
- _____ Duct tape around the access door seals and latches on AHD-115 to provide an additional protective barrier in order to prevent air in-leakage.
- _____ Close and latch the goose neck for AHD-116, located on east side.
- _____ Duct tape around the access door seals and latches on AHD-116 to provide an additional protective barrier in order to prevent air in-leakage.

_____ Return to the TSC/OSC.

RESTORATION

Perform the following actions to restore the emergency recirculation mode for the TSC/OSC:

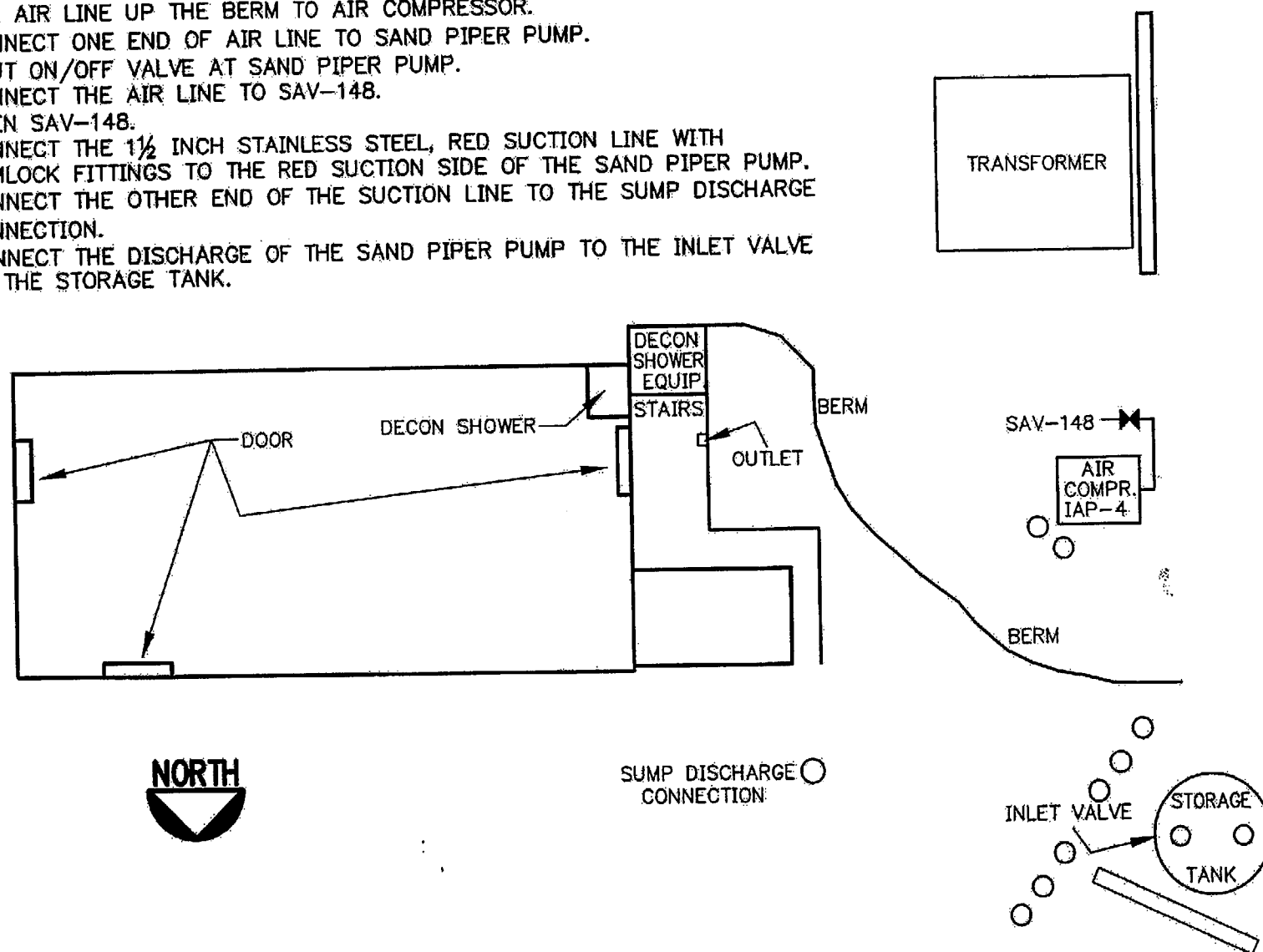
- _____ Remove the duct tape from the access door seals and latches on AHD-116 and AHD-115.
- _____ Unlatch and open the goose necks for AHD-116 and AHD-115.
- _____ Return to HVAC room and rotate the switch from the "EMERGENCY(2)" to the "NORMAL(1)" position on the emergency mode control panel (AH-229).
- _____ Verify AHD-120 is in the "CLOSED" position.
- _____ Close the access door for AHD-119.



GUIDANCE FOR PUMPING INTO SHOWER TANK

(EQUIPMENT LOCATED UNDER STAIRS AT WEST EXIT. BACKUP ELECTRICAL PUMP LOCATED IN DECON SHOWER)

1. RUN AIR LINE UP THE BERM TO AIR COMPRESSOR.
2. CONNECT ONE END OF AIR LINE TO SAND PIPER PUMP.
3. SHUT ON/OFF VALVE AT SAND PIPER PUMP.
4. CONNECT THE AIR LINE TO SAV-148.
5. OPEN SAV-148.
6. CONNECT THE 1½ INCH STAINLESS STEEL, RED SUCTION LINE WITH CAMLOCK FITTINGS TO THE RED SUCTION SIDE OF THE SAND PIPER PUMP.
7. CONNECT THE OTHER END OF THE SUCTION LINE TO THE SUMP DISCHARGE CONNECTION.
8. CONNECT THE DISCHARGE OF THE SAND PIPER PUMP TO THE INLET VALVE OF THE STORAGE TANK.



EMERGENCY RADIATION WORK PERMIT

EMERGENCY STATUS

Unusual Event	Date	Time	Site Area Emergency	Date	Time
Alert	Date	Time	General Emergency	Date	Time

PLANT STATUS OR CONDITION CAUSING EMERGENCY

RADIOLOGICAL STATUS

INSTRUCTIONS

1. NO ENTRY into controlled access areas unless a member of an emergency team. (Security remain at posts until relieved by TSC)
2. Only personnel who are qualified to wear respiratory equipment can be authorized for this ERWP, unless respiratory equipment is not required.
3. Report any unusual dose rates, equipment damage, etc., to the Operational Support Center.
4. Specific radiological requirements are outlined on Emergency Team Authorization Form.
5. RMT member requirement to be on re-entry team can be waived by Health Physics Coordinator for stable or no radiological hazards.
6. OSC Health Physics Coordinator is authorized to fill out one ETA for RMT survey and monitoring activities up to 5 REM TEDE with attached list of RMT Members. This does not include EST members.
7. Perform activity as discussed in Pre-job Briefing.

SUBMITTED BY OSC HEALTH PHYSICS COORDINATOR

APPROVED BY/EMERGENCY COORDINATOR

EMERGENCY RADIATION WORK PERMIT (ERWP) GUIDANCE

A. Purpose

To establish a blanket ERWP for use under emergency conditions. An ERWP is used in conjunction with the Emergency Team Authorization form.

B. Contents

1. Emergency Status - denotes current emergency classification level, updated as escalation in levels occur.
2. Plant Status or Condition Causing Emergency - the actual status of the plant including information on systems or equipment directly related to, or impacting radiological conditions.
3. Radiological Status - radiological status of CR-3 at the time of escalation/de-escalation of emergency.
4. Instructions - generic instructions for anyone involved with the emergency. Specific instructions are given on the ETA form.

C. Development and Approval

1. The OSC Health Physics Coordinator or designee completes this form and submits for review to the Dose Assessment Coordinator.
2. The Dose Assessment Coordinator reviews the permit and includes any additional information pertinent to the emergency.
3. The Emergency Coordinator or designee approves the ERWP.
 - a. This action authorizes the permit, AND
 - b. Automatically sets the exposure limit for personnel assigned to the ERWP to Emergency Dose Limit of 5 REM Total Effective Dose Equivalent.

PROCEDURE DEVELOPMENT AND REVISION RECORD

Procedure: EM0104

New Rev: 4

PRR#: 19215

Title: OPERATION OF THE OPERATIONAL SUPPORT CENTER

MINOR CHANGES

If Minor Changes are included, check the applicable box(es) and provide a list of affected steps.
The following corrections are incorporated throughout:

- | | |
|---|---|
| <input type="checkbox"/> Sentence Structure | <input type="checkbox"/> Redundant words or phrases |
| <input type="checkbox"/> Punctuation | <input type="checkbox"/> Abbreviations |
| <input type="checkbox"/> Capitalization | <input type="checkbox"/> Obviously incorrect units of measure |
| <input type="checkbox"/> Spelling | <input type="checkbox"/> Inadvertently omitted symbols (#, %, etc.) |
| <input type="checkbox"/> Organizational Changes: position titles,
department names, or telephone numbers | <input type="checkbox"/> Obvious step numbering discrepancies |
| | <input type="checkbox"/> Format |

The following corrections are incorporated in the step(s) indicated: "Throughout" is used in lieu of Step# if a specific change affects a large number of steps.

Correcting equipment nomenclature that does not agree
with field labels or balance of procedure

Changing information that is obviously incorrect and
referenced correctly elsewhere

Misplaced decimals that are neither setpoint values nor
tolerances

Reference to a procedure when an approved procedure
has taken the place of another procedure

Fixing branching points when it is clear the branching
steps were originally intended but were overlooked or
incorrectly stated due to step number changes

Adding clarifying information such as NOTES and CAUTIONS

Adding words to clarify steps, NOTES, or CAUTIONS which
clearly do not change the methodology or intent of the
steps

PROCEDURE DEVELOPMENT AND REVISION RECORD

Procedure: EM0104

New Rev: 4

PRR#: 19215

Title: OPERATION OF THE OPERATIONAL SUPPORT CENTER

NON-INTENT CHANGES

Changes are incorporated for the reasons provided. "Throughout" is used in lieu of Step # if a specific change affects a large number of steps. For new or cancelled procedures the reason is provided.

Pg 6, Sect. 3.3.1

Remove the condition of "Voluntary Basis" from the Emergency Worker exposure table. The Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA-400-R-92-001 restricts voluntary conditions for >25 Rem only. No other utility was identified that allows the voluntary basis for <25 Rem. CR-3 allowed this in the past due to requests by various sources. With more emphasis on mitigations for Severe Accident, it is no longer prudent to request volunteers up to 25 Rem.

Pg 30, Enclosure 8

Clarify item 2 that only personnel who are qualified to wear respiratory equipment can be authorized for this ERVVP, unless respiratory equipment is not required. This allows personnel needed to mitigate the emergency the freedom to work in an evacuated area as long as no respiratory equipment is required. All other emergency team qualifications are required.
