Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

March 7, 2000
LIC-00-0020

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station S1-137
Washington, DC 20555

Reference: Docket No. 50-285

SUBJECT: Transmittal of Changes to Fort Calhoun Radiological Emergency Response Plan (RERP) and Emergency Plan Implementing Procedures (EPIP) Manuals

In accordance with 10 CFR 50 Appendix A Part V and 10 CFR 50.4(b)(5)(iii), please find RERP and EPIP change packages enclosed for the Document Control Desk (holder of Copy 165) and the NRC Emergency Response Coordinator (holder of Copies 154, 155, and 156).

The document update instructions and summary of changes are included on the Confirmation of Transmittal (Form EP-1) forms attached to each controlled copy change package. Please return the Confirmation of Transmittal forms by April 23, 2000.

The revised documents included in the enclosed package are:

EPIP Index, pages 1 & 2, dated 02/29/00
EPIP-EOF-6, R28, issued 02/29/00
EPIP-RR-11, R14, issued 02/29/00
EPIP-RR-17A, R16, issued 02/24/00
EPIP-RR-22, R19, issued 02/29/00
EPIP-RR-22A, R5, issued 02/29/00
EPIP-RR-25, R18, issued 02/29/00
EPIP-RR-72, R12, issued 02/29/00
RERP Index, page 1, dated 02/29/00
RERP-Section B, R24, issued 02/29/00
RERP-Section H, R28, issued 02/29/00

A045

Please contact me if you have any questions regarding the enclosed changes.

Sincerely,

S. K. Gambhir
Division Manager
Nuclear Operations

SKG/jmh

Enclosures

c: T. H. Andrews, Emergency Response Coordinator (3 sets)
L. R. Wharton, NRC Project Manager (w/o enclosures)
W. C. Walker, NRC Senior Resident Inspector (w/o enclosures)
Winston & Strawn (w/o enclosures)

FORM EP-1
Rev. 6 (04/29/99)

OMAHA PUBLIC POWER DISTRICT

Confirmation of Transmittal for Emergency Planning Documents/Information

■ Radiological Emergency Response Plan (RERP) ■ Emergency Plan Implementing Procedures (EPIP) ☐ Emergency Planning Forms (EPF)

☐ Emergency Planning Department Manual (EPDM) ☐ Other Emergency Planning Document(s)/ Information

Transmitted to:

Name: Document Control Desk Copy No: 165
Tom Andrews Copy No: 154
Tom Andrews Copy No: 155
Tom Andrews Copy No: 156

Date: 3-7-00

The following document(s) / information is forwarded for your manual:

REMOVE SECTION	INSERT SECTION
EPIP Index Page 1 dated 01/19/00 & Page 2 dated 12/09/99	EPIP Index Pages 1 & 2 dated 02/29/00
EPIP-EOF-6 R27 issued 03/11/97	EPIP-EOF-6 R28 issued 02/29/00
EPIP-RR-11 R13 issued 04/28/94	EPIP-RR-11 R14 issued 02/29/00
EPIP-RR-17A R15 issued 09/18/97	EPIP-RR-17A R16 issued 02/24/00
EPIP-RR-22 R18 issued 03/11/97	EPIP-RR-22 R19 issued 02/29/00
EPIP-RR-22A R4 issued 04/28/94	EPIP-RR-22A R5 issued 02/29/00
EPIP-RR-23 R0 issued 06/23/93 (Deleted)	
EPIP-RR-25 R17 issued 05/09/96	EPIP-RR-25 R18 issued 02/29/00
EPIP-RR-72 R11 issued 05/30/96	EPIP-RR-72 R12 issued 02/29/00
RERP Index Page 1 dated 02/03/00	RERP Index Page 1 dated 02/29/00
RERP-Section B R23 issued 09/30/97	RERP-Section B R24 issued 02/29/00
RERP-Section H R27 issued 10/10/97	RERP-Section H R28 issued 02/29/00

Summary of Changes:
The procedures listed above were revised to update the format, change CID numbers to AR numbers and delete references to the TSC Dose Assessment Coordinator and TSC Chemistry Liaison positions. In addition to these changes the following revisions were made:

EPIP-EOF-6 was revised to add instructions for using the Control Room fax machine, and the definition for "Imminent Release" was changed.
EPIP-RR-11 was revised to change ERMS operator to Site Director Secretary.
EPIP-RR-17A was revised to add a step to use the east entrance, and oil supplier names were deleted.
EPIP-RR-22 FC-1188 requirements were revised to ensure they are consistent with requirements stated in OSC-2 and OSC-15.
EPIP-RR-22A was revised to show the OSC Director position as the primary contact for the Chemistry Coordinator.
EPIP-RR-23, Chemistry Liaison Actions was deleted.

Supervisor - Emergency Planning

I hereby acknowledge receipt of the above documents/information and have included them in my assigned manuals.

Signature: _____ **Date:** _____

Please sign above and return by **04/23/00** to:

Karma Boone
Fort Calhoun Station, FC-2-1
Omaha Public Power District
444 South 16th Street Mall
Omaha, NE 68102-2247

EMERGENCY PLAN IMPLEMENTING PROCEDURE INDEX

PROCEDURE NUMBER	TITLE	REVISION/DATE
EPIP-OSC-1	Emergency Classification	R32 07-29-99
EPIP-OSC-2	Command and Control Position Actions/Notifications	R34 10-07-98a
EPIP-OSC-9	Emergency Team Briefings	R7 12-09-99
EPIP-OSC-15	Communicator Actions	R19 12-14-99
EPIP-OSC-20	Site Population Exposure Estimates	R6 11-10-95
EPIP-OSC-21	Activation of the Operations Support Center	R8 09-30-97
EPIP-TSC-1	Activation of the Technical Support Center	R20 10-08-99
EPIP-TSC-2	Catastrophic Flooding Preparations	(R0 03-22-95) DELETED 05-09-95
	REINSTATED	R2 02-06-96
EPIP-TSC-8	Core Damage Assessment	R13 01-19-00
EPIP-EOF-1	Activation of the Emergency Operations Facility	R11 09-23-99b
EPIP-EOF-3	Offsite Monitoring	R16 10-26-99
EPIP-EOF-6	Dose Assessment	R28 02-29-00
EPIP-EOF-7	Protective Action Guidelines	R12 09-01-94
EPIP-EOF-10	Warehouse Personnel Decontamination Station Operation	R10 01-13-00
EPIP-EOF-11	Dosimetry Records, Exposure Extensions and Habitability	R18 09-18-97b
EPIP-EOF-19	Recovery Actions	R7 09-30-98
EPIP-EOF-21	Potassium Iodide Issuance	R3 09-18-97
EPIP-EOF-23	Emergency Response Message System	R5 10-12-99

EMERGENCY PLAN IMPLEMENTING PROCEDURE INDEX

PROCEDURE NUMBER	TITLE	REVISION/DATE
EPIP-EOF-24	EOF Backup Alert Notification System Activation	R3 09-09-99
EPIP-RR-11	Technical Support Center Director Actions	R14 02-29-00
EPIP-RR-13	Reactor Safety Coordinator Actions	R14 12-09-99
EPIP-RR-17	TSC Security Coordinator Actions	R13 11-30-99
EPIP-RR-17A	TSC Administrative Logistics Coordinator Actions	R16 02-24-00
EPIP-RR-19A	Operations Liaison Actions	R5 10-07-99
EPIP-RR-21	Operations Support Center Director Actions	R12 09-23-99
EPIP-RR-21A	Maintenance Coordinator Actions	R4 11-30-99
EPIP-RR-22	Protective Measures Coordinator/Manager Actions	R19 02-29-00
EPIP-RR-22A	Chemistry Coordinator Actions	R5 02-29-00
EPIP-RR-25	TSC/EOF Dose Assessment Coordinator Actions	R18 02-29-00
EPIP-RR-28	OSC Accountability and Dosimetry Technician Actions	R7 09-01-94a
EPIP-RR-29	EOF Administrative Logistics Manager Actions	R17 10-07-98
EPIP-RR-63	EOF Dose Assessment Assistant Actions	R7 05-30-96
EPIP-RR-66	Communication Specialist Actions	R8 08-31-99
EPIP-RR-72	Field Team Specialist Actions	R12 02-29-00
EPIP-RR-87	Radiation Protection Coordinator Actions	R6 09-30-98

WP8

Distribution Authorized

This procedure does not contain any proprietary information, or such information has been censored. This issue may be released to the public document room. Proprietary information includes personnel names, company phone numbers, and any information which could impede emergency response.

Fort Calhoun Station
Unit No. 1

EPIP-EOF-6

EMERGENCY PLAN IMPLEMENTING PROCEDURE

Title: DOSE ASSESSMENT

FC-68 Number: 53200

Reason for Change: Reformat, Change reference to "TSC Dose Assessment Coord." to "TSC Protective Measures Coordinator." Add instruction for using Okidata fax machine in the Control Room, change definition of Imminent Release. Change CID number to AR number.

Initiator: M. Reller

Preparer: M. Reller

DOSE ASSESSMENT

NON-SAFETY RELATED

1. PURPOSE

1.1 This procedure provides instructions for performing dose assessment for Ventilation Stack releases, Main Steam Line/Condenser Off-Gas releases, Containment leakage and Radwaste Building releases. It also provides instruction for estimating unmonitored release rates, and performing liquid release assessment.

2. REFERENCES/COMMITMENT DOCUMENTS

2.1 EPIP-EOF-7, Protective Action Guidelines

2.2 OI-ERFCS-1, Operation of the Emergency Response Facilities Computer System

2.3 CH-SMP-PA-0005, Monitoring of Gaseous Effluent Releases Via the Auxiliary Building Ventilation Duct Pathway

2.4 Technical Data Book IV.8, Area Monitor Setpoints

2.5 User's Guide for EAGLE 4.0

2.6 Engineering Analysis EA-FC-90-038, Manual Dose Assessment

2.7 Engineering Analysis EA-FC-90-105, Ingestion Pathway

2.8 Engineering Analysis EA-FC-90-035, EAGLE Radiological Parameters

2.9 Engineering Analysis EA-FC-93-066, EAGLE 4.0 Dose Calculation Methodology

2.10 Calculation FC-06179, TEDE and CDE conversion factors for offsite dose calculation

2.11 Commitments (other than Ongoing)

- AR 10029, IER-89-24
- AR 13302, IER-92-20
- AR 17061, LIC-95-0049/LIC-95-0230

3. DEFINITIONS

3.1 DELTA T (ΔT) TEMPERATURE - the temperature difference between 10 and 60 meters, in units of centigrade. The value displayed on the ERFCS equates to a 100ΔT[(T @ 60m - T @ 10m) x 2].

3.2 DURATION OF RELEASE - the time in hours the release is expected to continue.

3.3 DOSE - the amount of ionizing radiation that results from an amount of energy being absorbed in the human body, in units of Rem.

3.4 DOSE RATE - Dose per unit time, in units of Rem/hour.

3.5 ERFCS - Emergency Response Facility Computer System.

3.6 IMMINENT RELEASE - An impending release of the radioactive gas in Containment.

3.7 CDE - Committed Dose Equivalent.

3.8 TEDE - Total Effective Dose Equivalent.

3.9 COMMAND AND CONTROL POSITION: The position that is currently in charge of the emergency response, either the Shift Supervisor, Control Room Coordinator, Site Director or Emergency Director.

3.10 RELEASE RATE (Q) - the emission rate of the effluent in units of Curies per second from the release point.

4. PREREQUISITES

4.1 A radioactive release is suspected, imminent, or known to be in progress.

5. PROCEDURE

NOTE: If on-site meteorological data is not available, contact the National Weather Service (number in the Emergency Phone Book), and request wind speed and direction. For night time (sunset to sunrise) with no precipitation, use a ΔT of +2.0 and a stability class F. For all other conditions, use a ΔT of -1.0 and a stability class D.

5.1 To perform dose assessments in the Control Room, use Attachment 6.1.

5.2 To perform dose assessments in the TSC, use Attachment 6.2.

5.3 To perform dose assessments in the EOF, use Attachment 6.3.

5.4 When needed, perform dose assessments and updates to the states at least every 60 minutes. It is the goal of the Fort Calhoun Station to attempt to provide assessments and updates at 15 minute intervals. (AR 13302)

5.5 Retain all documentation (logs, assessments, etc.) generated or used during the emergency. At the termination, deliver all documentation to the TSC Administrative Logistics Coordinator in the TSC, or the EOF Administrative Logistics Manager in the EOF.

6. ATTACHMENTS

6.1 Dose Assessment in the Control Room

6.2 Dose Assessment in the TSC

6.3 Dose Assessment in the EOF

6.4 Computerized Dose Assessment

6.5 Unmonitored Release Assessments

Attachment 6.1 - Dose Assessment In The Control Room

1. Sign in on the Accountability Roster and put on the Personnel Identification Badge.

2. Monitor panels AI-33 A, B and C (or ERFCS, pages 197, 360 and 361) for indications of increasing activity on any of the process and/or area monitors. Form FC-197 or other records may be used to collect meteorological and radiological data for an assessment:

   NOTE: Read all of the following substeps to determine the correct attachment to use.

   2.1 **IF** RM-062 (or RM-052, in the stack position), RM-043, RM-070 through RM-075 and/or 091A/B reach an alarm setpoint, **THEN** perform an assessment per Attachment 6.4.

   2.2 **IF** RM-057 reaches an alarm setpoint, **THEN** request Operations place RM-064 on the affected steam generator, **THEN** perform an assessment per Attachment 6.4.

   2.3 **IF** RM-063 and/or RM-064 show an increase in activity, **THEN** refer the Command and Control position to EPIP-EOF-7, **THEN** perform an assessment per Attachment 6.4.

   2.4 **IF** any area monitors indicate >1000 times background (background listed in the Technical Data Book), **THEN** inform the Command and Control position for classification information.

   2.5 **IF** a suspected release pathway is unmonitored for any reason, **THEN** use Attachment 6.5 to perform the assessment.

3. Upon completion of any assessment, perform the following:

   3.1 Obtain a printout of the assessment results.

   3.2 **IF** Command and Control is in the Control Room, **THEN**

      3.2.1 Have the Command and Control position review and approve PARs and the assessment results by signature.

      3.2.2 Fax the approved copy to the states, TSC and EOF per the following procedure. The transmit time should be documented.

      3.2.3 Load Documents

      3.2.4 Press "SELECT FUNCTION" key

      3.2.5 Press "BROADCAST MEMORY TX" key

      3.2.6 Press "#" key on numeric key pad

3.2.7 Enter "1" on numeric key pad

3.2.8 Press "YES◄" for each location

3.2.9 Press "► NO" when all locations are entered

3.2.10 Press "START"

3.3 **IF** Command and Control is in the TSC, **THEN**:

3.3.1 Fax the unsigned assessment results to the TSC using the "TSC Dose" distribution code.

3.3.2 Inform the TSC Protective Measures Coordinator of the FAX transmittal.

Attachment 6.2 - Dose Assessment In The Technical Support Center

NOTE: Dose assessment will only be performed in the TSC in the event that the EAGLE equipment in the Control Room is unavailable or inoperable. The TSC EAGLE equipment may also be used as a backup to the equipment located at the EOF.

1. Sign in on the Accountability Roster.

2. Inform the Protective Measures Coordinator that you will be performing dose assessment in the TSC.

3. Monitor ERFCS, Pages 197, 360 and 361 for indications of increasing activity on any of the process and/or area monitors. Form FC-197 or other record may be used to collect meteorological and radiological data for an assessment.

   3.1 **IF** RM-062 (or RM-052, in the stack position), RM-043, RM-070 through RM-075 and/or 091A/B reach an alarm setpoint, **THEN** perform an assessment per Attachment 6.4.

   3.2 **IF** RM-057 reaches an alarm setpoint, **THEN** request Operations place RM-064 on the affected steam generator, **THEN** perform an assessment per Attachment 6.4.

   3.3 **IF** RM-063 and/or RM-064 show an increase in activity, **THEN** refer the Command and Control position to EPIP-EOF-7, **THEN** perform an assessment per Attachment 6.4.

   3.4 **IF** any area monitors indicate >1000 times background (background listed in the Technical Data Book), **THEN** inform the Command and Control position for classification information.

   3.5 **IF** a suspected release pathway is unmonitored for any reason, **THEN** use Attachment 6.5 to perform the assessment.

4. Upon completion of any assessment, perform the following:

   4.1 Obtain a printout of the assessment results.

   4.2 Forward the assessment results to the Protective Measures Coordinator for PAR input and review of the assessment results by signature.

   4.3 Forward the assessment results to the Site Director for approval of the PARs and assessment results by signature.

   4.4 Fax the approved copy to the states and EOF. The transmit time should be documented.

5. Provide detailed briefing to oncoming shift relief of emergency conditions and dose assessment status.

Attachment 6.3 - Dose Assessment in the Emergency Operation Facility

1. **IF** dose assessments are being performed in the Control Room, **THEN** contact the technician in the Control Room performing dose assessment and review all previous assessments using the fax copies.

2. **IF** dose assessments are being performed in the TSC, **THEN** contact the technician performing dose assessment in the TSC and review all previous assessments using the fax copies.

3. Standby to transfer dose assessment from the Control Room (or TSC) to the EOF, as directed by the Protective Measures Manager.

4. When directed to take over dose assessment, inform the technician in the Control Room (or TSC) of your actions.

5. Monitor ERFCS, pages 197, 360 and 361 for indications of increasing activity on any of the process and/or area monitors. Form FC-197 or other record may be used to collect meteorological and radiological data for an assessment.

   5.1 **IF** RM-062 (or RM-052, in the stack position), RM-043, RM-070 through RM-075 and/or 091A/B reach an alarm setpoint, **THEN** perform an assessment per Attachment 6.4.

   5.2 **IF** RM-057 reaches an alarm setpoint, **THEN** request Operations place RM-064 on the affected steam generator, **THEN** perform an assessment per Attachment 6.4.

   5.3 **IF** RM-063 and/or RM-064 show an increase in activity, **THEN** refer the Command and Control position to EPIP-EOF-7, **THEN** perform an assessment per Attachment 6.4.

   5.4 **IF** any <u>area</u> monitors indicate >1000 times background (background listed in the Technical Data Book), **THEN** inform the Command and Control position for classification information.

   5.5 **IF** a suspected release pathway is unmonitored for any reason, **THEN** use Attachment 6.5 to perform the assessment.

6. Upon completion of any assessment, perform the following:

   6.1 Obtain a printout of the assessment results.

   6.2 Forward the assessment results to the Protective Measures Manager for PAR input and review of the assessment results by signature.

   6.3 Forward the assessment results to the Emergency Director for approval of the PARs and assessment results by signature.

   6.4 Fax the approved copy to the states and TSC. The transmit time should be documented.

7. Provide detailed briefing to oncoming shift relief of emergency conditions and dose assessment status.

Attachment 6.4 - Computerized Dose Assessment

CAUTION

IF process monitor readings increase by 50% while performing an assessment, or the command and control position requests an immediate assessment, **THEN** complete the current assessment and immediately start another. (AR 10029)

1. To Logon to the computer, perform the following:

   1.1 Is terminal on, with EAGLE Logo screen showing?

      1.1.1 If yes, proceed to Step 1.2.

      1.1.2 If no, proceed to Step 1.8.

   1.2 Press <ENTER> to start EAGLE.

   1.3 At EAGLE Mode screen, during an actual emergency, select "THIS IS AN EMERGENCY", press <ENTER>.

   1.4 At next screen, select "NETWORK" mode of operation. "PC Stand-Alone" may be used if the network is not available.

   1.5 After EAGLE Network status check function, is "EAGLE Data Base Status" screen showing?

      1.5.1 If no, proceed to Step 1.6.

      1.5.2 If yes, updating is necessary. Select one of the following:

      - "D" to transfer files from the system to the PC in use. This will take user to the EAGLE Main Menu. Proceed to Step 1.6.
      - "U" to transfer files from the PC in use to the system. This will take user to EAGLE Main Menu. Proceed to Step 1.6.
      - "1" to start with plume segment 1 on the system. This will take user directly to the EAGLE Main Menu. Proceed to Step 1.6.

1.6 At EAGLE Main Menu screen, is the message "Network Mode" flashing on the screen?

1.6.1 If no, proceed to Step 1.7.

1.6.2 If yes, proceed to Section 2, "Performing Dose Assessment".

1.7 To return to Network Version:

1.7.1 Press <5>, then <ENTER> to return to Network Version.

1.7.2 Proceed to Section 2, "Performing Dose Assessment".

1.8 To Re-boot the system to Network Version:

1.8.1 Turn off the main power switch for the computer.

1.8.2 After 5 seconds, turn on the main power switch for the computer.

1.8.3 After 1-2 minutes, when computer prompts. Press <Ctrl/Alt/Delete> buttons simultaneously.

1.8.4 When the computer prompts you for a user name enter “EAGLE”.

1.8.5 The default password is also “EAGLE”

1.8.6 Proceed back to Step 1.1.

1.9 Forcing EAGLE Terminals Off Network:

1.9.1 After noting which unit is logged on, determine if you wish to log the terminal off. If so, continue. Otherwise, stop.

1.9.2 Press <Ctrl/ESC> buttons simultaneously.

1.9.3 Using the mouse, double-click on the "Force EAGLE Terminals Off Network" Icon.

1.9.4 At window labeled "Specify Parameters", type in terminal name from Step 1.9.1, and select "Start" button.

1.9.5 Using mouse, double-click on the "EAGLE" icon at bottom of screen to return to the program.

2. Performing Dose Assessment:

NOTE: Graphics capabilities exist in the TSC and EOF, using either of the computer units and printers. This procedure addresses performing graphics only at the EOF, since graphics operations are time consuming.

NOTE: For PCs with the laser printers, screen prints can be made by pressing the PRINT SCREEN key.

2.1 Entering Radiological Data

2.1.1 At EAGLE Main Menu screen, enter "1" to perform Atmospheric Diffusion and Dose Calculations.

2.1.2 If the system indicates another terminal is logged on, note the terminal name (i.e., "CR", "SIM", "TSC", "TSCR", "EOF" and "EOFR"), and proceed back to Step 1.9., "Forcing EAGLE Terminals Off Network". Otherwise, continue.

2.1.3 At Model Control Options Menu, enter "y" to perform normal dose assessment.

2.1.4 At plume segment count screen, enter "1" to start a new plume run, or enter a specific plume segment number if needed.

2.1.5 At release duration screen, enter the projected release duration as determined by the Command and Control position and press "y" to accept.

2.1.6 At Summary of Source Release Rates screen, select the affected release pathway.

2.1.7 At selected Source Release Rates screen, select one of the available options to change release rates. The method described here uses radiation monitor data.

2.1.8 At Radiation Monitor data screen, select affected monitor, then enter the monitor reading and flow information if applicable, then press "y" to accept.

2.1.9 At selected Source Release Rates screen, review the resultant release rates for accuracy and press "y" to accept.

2.1.10 At Summary of Source Release Rates screen, another release path may be selected (which will sum release rates from all release paths), or, if there are no other release paths, press "y" to accept.

2.2 Entering Meteorological Data

NOTE: When performing assessments, use the most positive ΔT and the slowest wind speed.

2.2.1 At Summary of Meteorological Parameters, all new meteorological data may be entered, or selected parameters may be entered.

2.2.2 When all meteorological data is entered, press "y" to accept.

2.3 Release/Dose Information Preparation

2.3.1 At EAGLE Output menu, select "1" for Release/Dose Assessment Information.

2.3.2 At Update Report to Offsite Authorities screen, press <ENTER>.

2.3.3 At Release Information Menu, select "1", Do NOT Distribute Release Information.

2.3.4 At Model Output Control Menu, change distribution to distribute ONLY to your printer.

2.3.5 When distribution is set, press "y" to accept.

2.3.6 At EAGLE Dose Assessment Information screen, press <ENTER>.

2.3.7 At Computer Generated Protective Action Recommendations screen, press <ENTER>.

2.3.8 At Authorization Page/Par Menu, select "2", Do NOT Distribute Authorization Page and Computer Generated PARs.

2.3.9 At Emergency Classification screen, select desired emergency classification as determined by the Command and Control position and press "y" to accept.

2.3.10 At Prognosis of Emergency screen, select desired emergency prognosis as determined by the Command and Control position and press "y" to accept.

2.3.11 At Protective Action Recommendations screen, do not enter any PARs, but press "y" to accept.

2.3.12 At Comment screen, enter any necessary comments and press "y" to accept.

2.3.13 At Review/Approval screen, do not enter any names, but press "y" to accept.

2.3.14 At Dose Assessment/PAR Summary screen, press <ENTER>.

2.3.15 At Dose Assessment/PAR Menu, select "1", Distribute Dose Assessment/PARs.

2.3.16 At Model Output Control Menu, change distribution to distribute ONLY to your printer.

2.3.17 When distribution is set, press "y" to accept.

2.4 Final Review, Approval and Distribution

2.4.1 Perform this function as described in the Attachment specific to your facility.

2.5 Follow-up Actions

2.5.1 At the EAGLE Output Menu, you may reenter data for the current plume segment if necessary, proceed to the next plume segment, or exit the program.

2.5.2 When transferring assessment to another facility, exit the program as directed so that the other facility may assume dose assessment functions.

3. Imminent Release Assessment

3.1 Entering Radiological Data

3.1.1 At EAGLE Main Menu screen, enter "1" to perform Atmospheric Diffusion and Dose Calculations.

3.1.2 At Model Control Options Menu, enter "I" to change status to "Execute Imminent Release Option" and press "y" to accept.

3.1.3 At Containment Imminent Release screen, change time to release, flow and radiological parameters as necessary, and press "y" to accept.

3.1.4 At Containment Imminent Release Summary screen, enter "s" to Perform Straight-Line Dose Projections.

3.1.5 At release duration screen, enter the projected release duration as determined by the Command and Control position and press "y" to accept.

3.2 Entering Meteorological Data

3.2.1 At Summary of Meteorological Parameters, all new meteorological data may be entered, or selected parameters may be entered.

3.2.2 When all meteorological data is entered, press "y" to accept.

3.3 Results

3.3.1 At Plume Centerline Values Based on Straight line Gaussian Diffusion Model screen, make a screen print of the results by pressing the "Print Screen" button. Press <ENTER>.

3.3.2 Provide results to the Command and Control position.

3.4 Follow-up Actions

3.4.1 At the Containment Imminent Release screen, you again may reenter release, flow and radiological data, or you may quit this portion of the program.

3.4.2 If you quit the Imminent Release Option, at Model Control Options Menu, enter "y" to perform normal dose assessment.

3.4.3 At plume segment count, enter "1" to start a new plume run, or enter a specific plume segment number if needed.

3.4.4 At release duration screen, enter the projected release duration used in the Imminent Release Option and press "y" to accept.

4. Liquid Release Assessment

4.1 Entering Radiological Data

4.1.1 At EAGLE Main Menu screen, enter "2" to perform Tabular Displays of MODEL Results.

4.1.2 At Table Main Menu, enter "3" to perform Liquid Effluent Isotopic Activity Display.

a) Obtain isotopic analysis of Monitor Tank activity from Chemistry.

b) Obtain Monitor Tank flowrate from the Control Room.

4.1.3 At the Projected Isotopic Activity at M.U.D. Intake Structure, change Monitor Tank Flowrate, River Flowrate, and Monitor Tank Activity values as necessary.

4.2 Results

4.2.1 If results exceed the listed EPA Limits, report results to the Command and Control position so that actions may be reported to M.U.D. dispatcher and the Nebraska Emergency Management Agency.

5. Error Correction

5.1 If an error message should appear on the PC screen, follow the instructions given (i.e., press <ENTER>.

5.2 If the errors cannot be corrected or other problems arise, reboot the system as described in Attachment 6.4, Section 1, Step 1.8.

5.3 If this does not correct the problem, perform dose assessment at another terminal.

5.4 If the printer fails, manually record dose assessment results using a FC-1188 form, and fax this form using the group EAGLE FAX code.

6. Graphics/Tabular Displays

6.1 Graphics and Tabular displays are explained in the EAGLE User's Guide.

Attachment 6.5 - Determining Unmonitored Release Rates

NOTE: For determining projected release rates from the Ventilation Stack when RM-062/52 and 63 are off-scale/not available, refer to CH-SMP-PA-0005.

NOTE: For determining projected release rates from the Main Steam/Condenser Off-gas system when RM-057/64 are off-scale/not available, use Section 1

NOTE: For determining projected release rates from Containment when RM-091A/B and RM-070 through RM-075 are off-scale/not available, use Section 2.

NOTE: For determing actual release rates using Field Team data, use Section 3.

1. Main Steam/Condenser Off-gas System

   1.1 If RM-057 goes off-scale or becomes inoperable during an off-gas release, use RM-064 and a main steam flow value (in lbm/hr) from ERFCS (i.e., page 353) per the following criteria. (AR 17061)

      1.1.1 **IF** the off-gas line is directed to the Ventilation Stack, **THEN** use Attachment 6.4 for the assessment.

      1.1.2 **IF** RM-064 is reading at or below background, and the off-gas line is not directed to the Ventilation Stack, **THEN** use one (1) net count per minute (NCPM) for the RM-064 reading, go to Attachment 6.4.

      1.1.3 **IF** RM-064 is reading above background, and the off-gas line is not directed to the Ventilation Stack, **THEN** use the indicated reading, and proceed to Attachment 6.4.

      1.1.4 IF RM-064 is off-scale high or is otherwise known to be inoperable, go to Step 1.2 below.

   1.2 If RM-064 goes off-scale high or is otherwise known to be inoperable, perform the following:

      1.2.1 Obtain direct radiation readings on the main steam lines in Room 81. Refer to Figure 6.5.1 for reading locations.

      1.2.2 If the dose rate is between 0 and 100 mRem/hr, use the following equation to calculate the TEDE release rate:

$$Q_{TEDE} = (17.5)\ (\text{Contact Dose Rate in mRem/hr})$$

1.2.3 If the dose rate is >100 mRem/hr, use the following equation to calculate the TEDE release rate:

$$Q_{TEDE} = (5)\ (\text{Contact Dose Rate in mRem/hr})$$

1.2.4 Input the release rate data into the EAGLE dose assessment procedure to obtain the dose and dose rate results. (AR 17061)

2. Containment Leakage

2.1 If all Containment Area Radiation Monitors are off-scale or inoperable, perform the following:

2.1.1 Obtain direct radiation readings on containment penetrations C-2 or H-4. Refer to Figures 6.5.2 and 6.5.3 for reading locations.

2.1.2 Multiply this penetration reading by the Containment Multiplication Factor (CMF) using Figure 6.5.4, to determine an equivalent area monitor reading.

2.1.3 Insert the area monitor reading into the EAGLE dose assessment procedure to obtain the dose and dose rate results.

3. Determining Actual Release Rates from Field Team Data

NOTE: Field Teams must be dispatched, and data from the approximate plume centerline must be available in order to complete this procedure. The Field Team Specialist should be consulted for Field Team data.

3.1 Obtain FC-EPF-29 and collect the following data:

3.1.1 Date and time.

3.1.2 Downwind distance (in miles) to the sampling location.

3.1.3 Wind direction

3.1.4 Delta temperature (ΔT)

3.1.5 Wind speed

3.1.6 Diffusion factor ($\chi\mu/Q$) - Using Figure 6.5.5, determine the projected diffusion factor, based on time of day and downwind distance. During transitional periods, use the more conservative, or smaller, value.

3.1.7 Dose rate reported from the field team in Rem/hr.

3.1.8 Iodine air concentration reported from the field team in µCi/cc.

3.1.9 Particulate air concentration reported from the field team in µCi/cc.

3.1.10 Noble gas release rate from dose rate (Q_{NG} in Ci/sec) - Multiply the wind speed (Step 3.1.5) by the dose rate (Step 3.1.7) and by the factor provided, then divide the result by $\chi\mu/Q$ (Step 3.1.6).

3.1.11 Iodine release rate from Q_{NG} (in Ci/sec) - Multiply the noble gas release rate (Step 3.1.10) by the factor provided.

3.1.12 Iodine release rate from air sample data (in Ci/sec) -If desired, this method may be used if iodine air sample date is available from the Field Teams. Multiply the wind speed (Step 3.1.5) by the iodine concentration (Step 3.1.8), then divide the result by the $\chi\mu/Q$ (Step 3.1.6).

3.1.13 Particulate release rate from air sample data (in Ci/sec) - Multiply the wind speed (Step 3.1.5) by the particulate concentration (Step 3.1.9), then divide the result by the $\chi\mu/Q$ (Step 3.1.6).

3.2 Input Of Results

3.2.1 Upon completion of the calculations, input the release rate data into the EAGLE dose assessment procedure to obtain any dose and dose rate data as needed.

3.3 Follow-up Actions

3.3.1 Sign the assessment form and indicate the time completed.

Figure 6.5.1 - Main Steam Headers Radiation Dose Measurement Point Locations

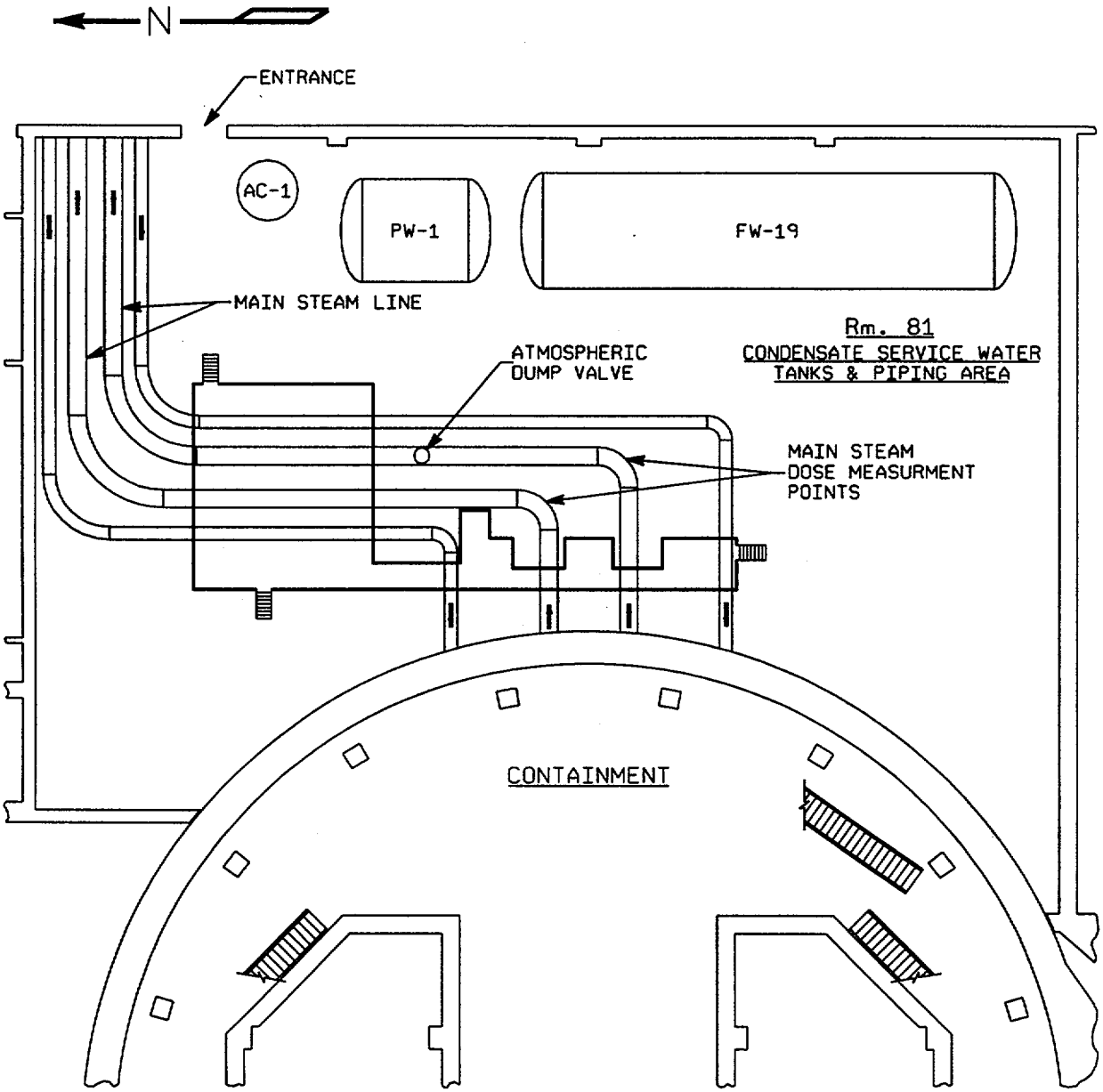


Figure 6.5.2 - Auxiliary Building - Plant Elevation 1007'-0" & 1013'-0

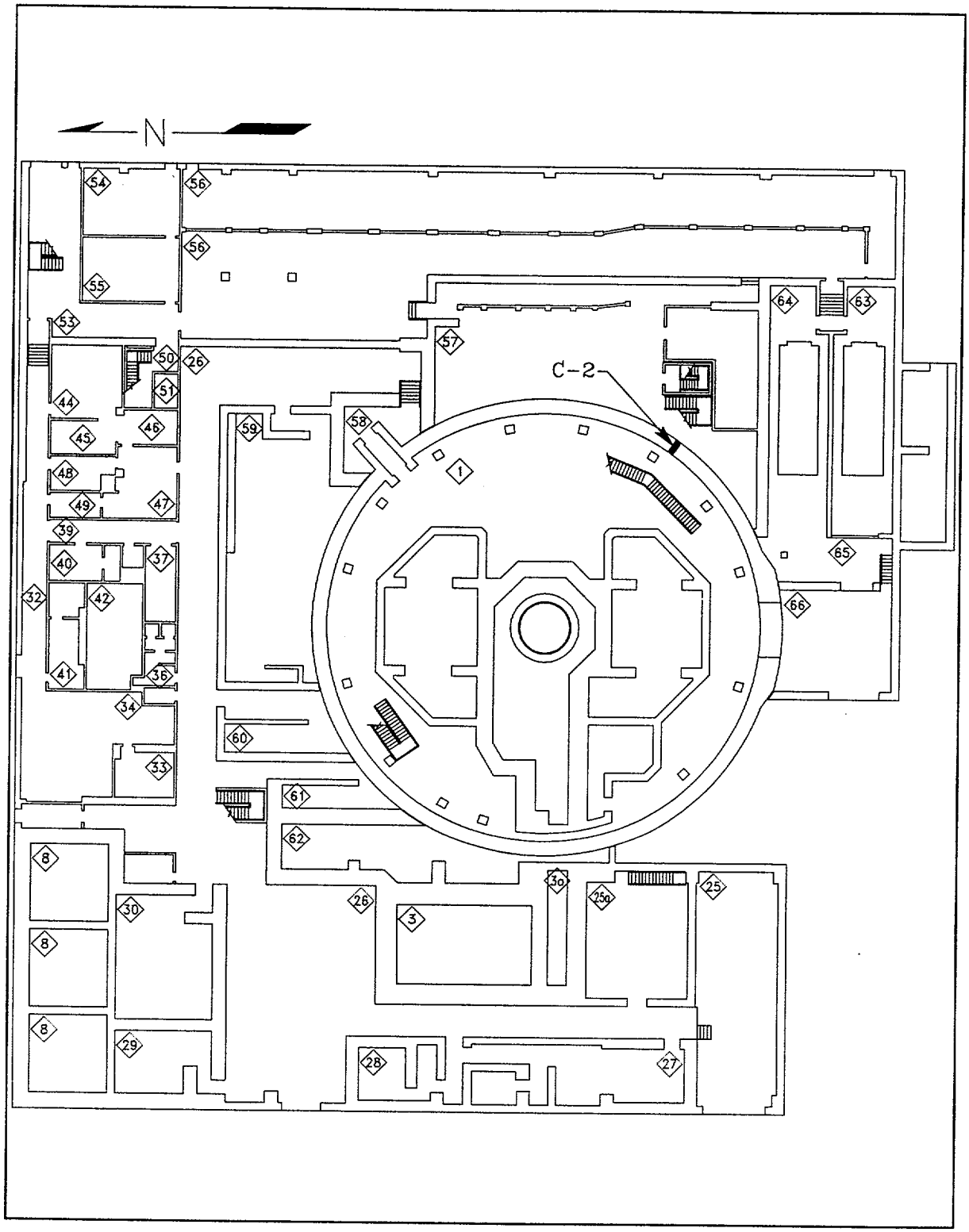


Figure 6.5.3 - Auxiliary Building - Plant Elevation 1036'-0

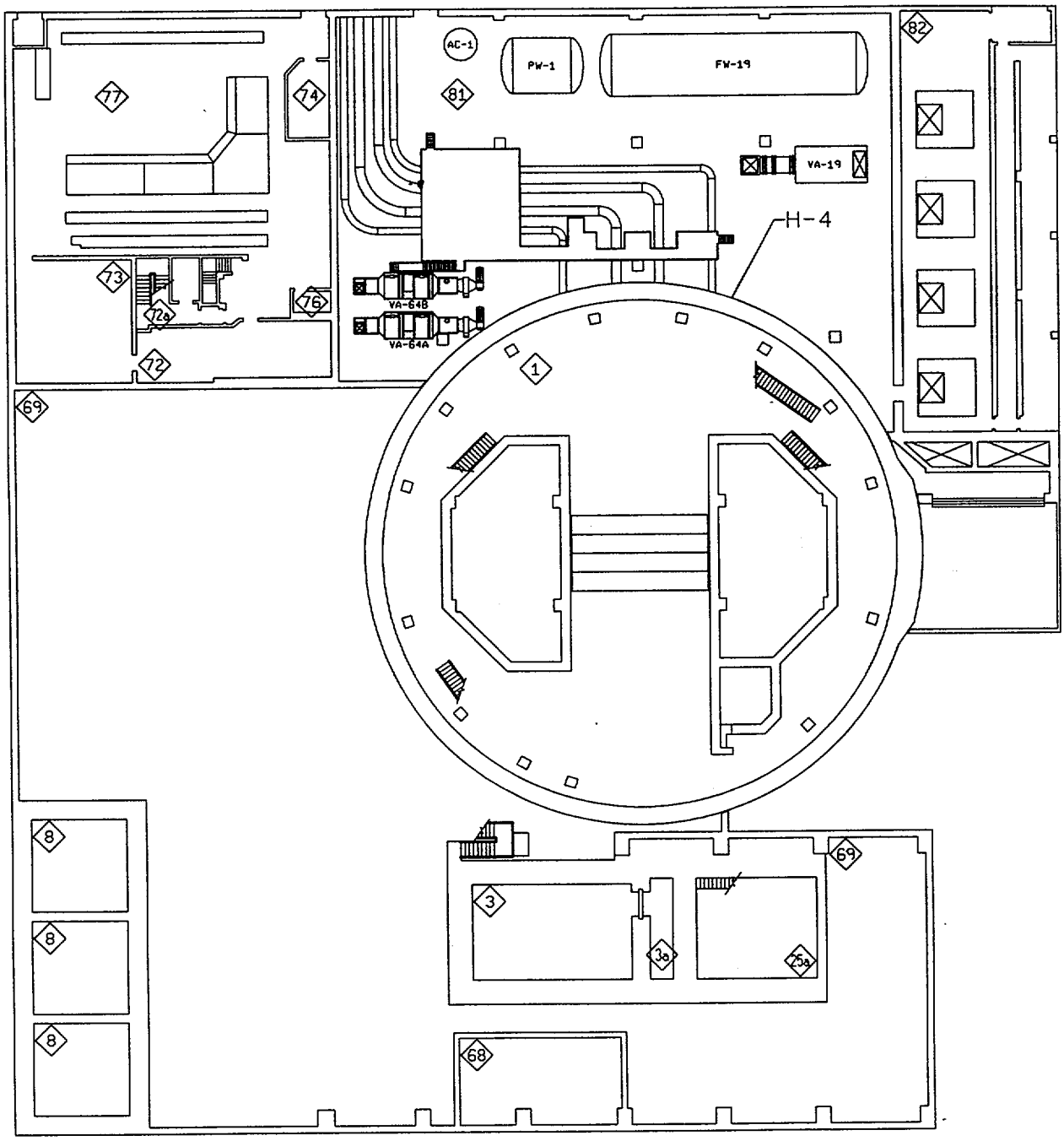


Figure 6.5.4 - Containment Multiplication Factor (CMF)

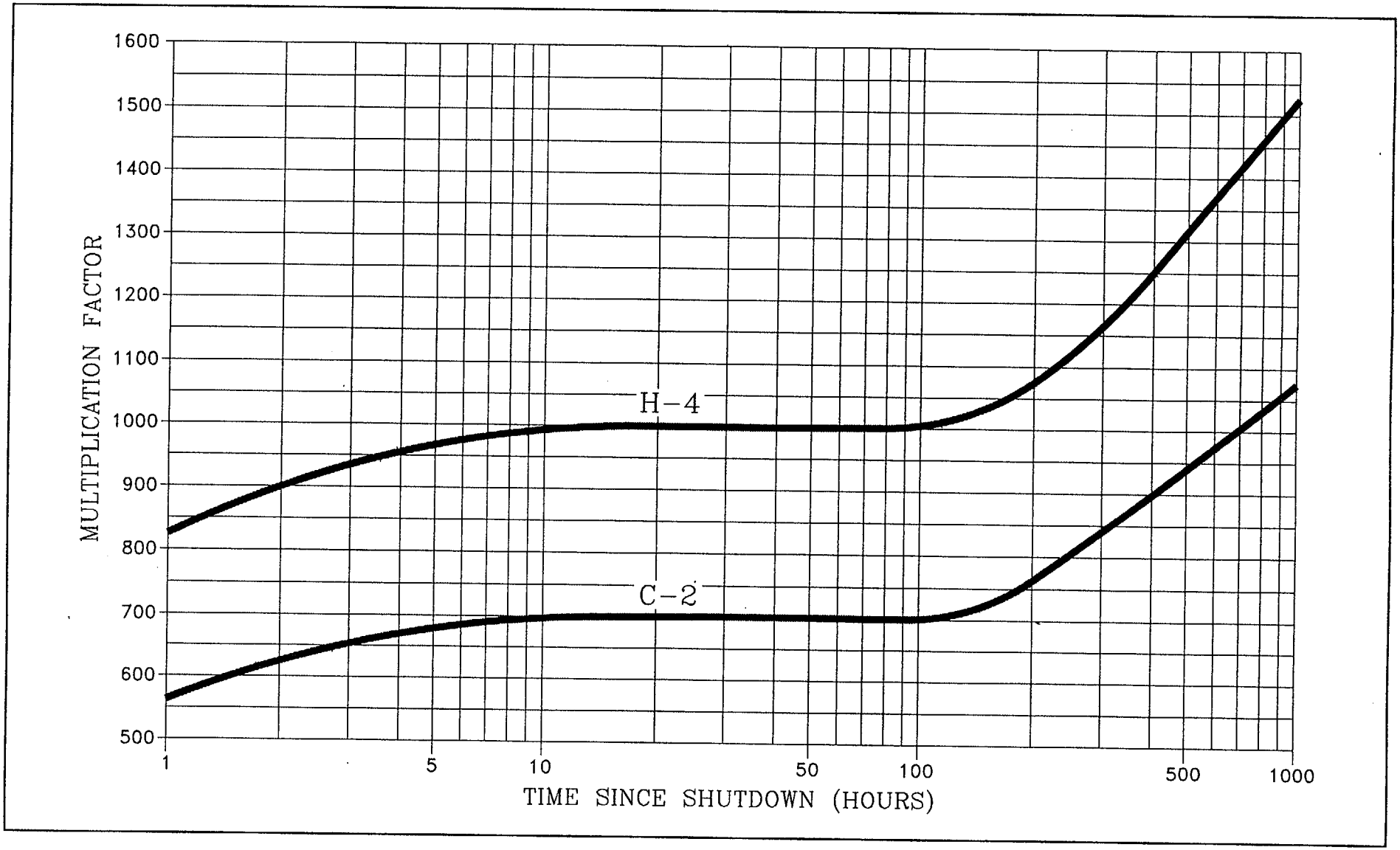
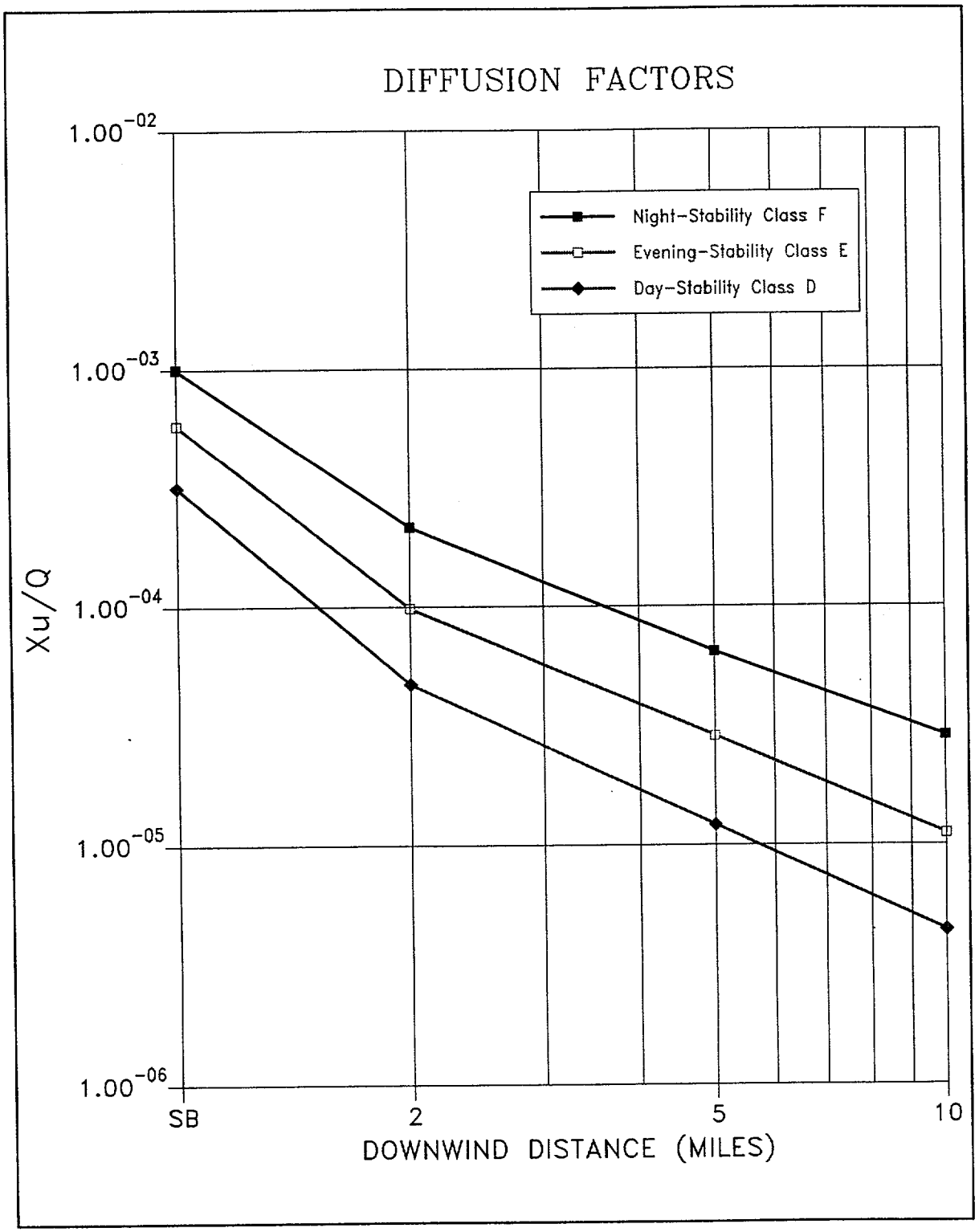


Figure 6.5.5 - Diffusion Factors



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Fort Calhoun Station
Unit No. 1

EPIP-RR-11

EMERGENCY PLANT IMPLEMENTING PROCEDURE

Title: TECHNICAL SUPPORT CENTER DIRECTOR ACTIONS

FC-68 Number: 53204

Reason for Change: Revise Format, Delete Note, Delete reference to Chemistry Liaison. Change ERMS operator to Site Directors Secretary. Change CID to ARs'.

Preparer: Mark Reller

TECHNICAL SUPPORT CENTER DIRECTOR ACTIONS
NON SAFETY RELATED

1. PURPOSE

   1.1 The purpose of this procedure is to outline assignment and responsibilities of personnel in the Emergency Response Organization filling the position of Technical Support Center Director.

2. REFERENCES/COMMITMENT DOCUMENTS

   2.1 EPIP-TSC-1, "Activation of the Technical Support Center"

   2.2 EPIP-EOF-21, "Potassium Iodide Issuance"

   2.3 EPIP-OSC-1, "Emergency Classification"

   2.4 EPIP-EOF-7, "Protective Action Guidelines"

   2.5 EPIP-OSC-2, "Command and Control Position Actions/Notifications

   2.6 Commitment Documents (other than Ongoing)

   - AR 11809, LIC-91-189

3. DEFINITIONS

   None

4. PREREQUISITES

   None

5. PROCEDURE

   5.1 Use the Technical Support Center Director Checklist, Attachment 6.1, as an aid to completing required actions.

   5.2 Review the procedure and checklist, and accomplish the applicable steps both upon initial activation and periodically, as required, thereafter.

   5.3 Retain all documentation (logs, calculation sheets, notes, etc.) generated or used during the emergency. At the termination, deliver all documentation to the TSC Administrative Logistics Coordinator position in the TSC.

6. ATTACHMENTS

6.1 Technical Support Center Director Checklist

ATTACHMENT 6.1

TECHNICAL SUPPORT CENTER DIRECTOR CHECKLIST

*** * Maintain a log of all key activities * ***

	(✓)	INIT/TIME
1. Sign in on the Accountability Roster, obtain worker packet and put on the Personnel Identification Badge.		___/___
2. If not yet completed, activate the TSC per EPIP-TSC-1.		___/___
NOTE: The TSC Administrative Logistics Coordinator is resposible for coordinating shift rotations and necessary notifications for call out personnel.		
3. Working with your staff determine 24-hour staffing schedule for all TSC positions and provide to the TSC Administrative Logistics Coordinator.		___/___
4. Periodically review the following steps and perform, as required.		___/___
4.1 Maintain control of the TSC working area and keep noise levels down.	___	
4.2 Coordinate the actions of the TSC Security Coordinator, the TSC Administrative Logistics Coordinator, the Reactor Safety Coordinator, Protective Measures Coordinator, and the TSC Operations Liaison.		
4.3 Keep the Site Director informed of operational and radiological analyses occurring as a result of the emergency.	___	
4.4 Ensure only necessary personnel are in the TSC working area.	___	
4.5 Review TSC support needed and have needed expertise called in.	___	

	(✓)	INIT/TIME
4.6 If directed by the Site Director, approve information releases to the public (via available communications).	____	
4.7 Ensure communications are maintained between the TSC, Control Room, OSC and the EOF.	____	
4.8 When staffed, keep the Site Directors Secretary up to date with event chronology information for transmission to other ERMS locations.	____	
4.9 If advised by the Protective Measures Coordinator that Potassium Iodide (KI) issuance is warranted, then refer to EPIP-EOF-21 and discuss with the Site Director.	____	
4.10 If advised by the Protective Measures Coordinator that habitability conditions in the OSC have degraded, then consider and recommend to the Site Director the relocation of the OSC to an appropriate location. Possible alternatives are:	____	

- TSC
- Training Center
- Warehouse
- Administration Building

4.11 Review status board information, and ensure status boards, including "priorities" listings, are kept up-to-date.	____	
4.12 Whenever relieved by another qualified TSC Director, fully brief your relief on current emergency status, actions taken during shift, and actions in progress.	____	
4.13 CLASSIFICATION: Assess the current emergency classification with the Site Director to determine whether it is still valid per EPIP-OSC-1.	____	
4.14 PARs: Review with the Site Director, the need to authorize issuance of protective action recommendations to offsite authorities per EPIP-EOF-7.	____	

		(✓)	INIT/TIME
4.15	NOTIFICATIONS: Assist the Site Director in ensuring that all notifications, including PARs are made per EPIP-OSC-2.	____	
4.16	If directed by the Site Director, coordinate with the Shift Manager the sounding of the appropriate plant alarm and associated Gai-Tronics announcement for: • emergency classification upgrades • other imminent dangers (tornadoes, fires, etc.)	____	
4.17	Ensure TSC personnel are performing necessary technical analyses of the emergency and providing alternative solutions to concerns.	____	
4.18	Ensure the Reactor Safety Coordinator's group is performing core damage assessments, as needed.	____	
4.19	If it is determined that an assessment team is needed to verify if any radioactive release is in progress or to determine the source and release path of any release in progress, assign adequate personnel to assist with this task. They are to coordinate with and report any findings to the Protective Measures Coordinator. (AR 11089)	____	
4.20	Coordinate with the Control Room Coordinator to identify approved procedures, or direct the TSC Staff to provide new procedures to which operators may transition from off-normal procedures when the event has been mitigated.	____	____/____
5.	Review EPIP-0SC-2 with the Site Director for guidelines when conditions warrant a <u>downgrade</u> or <u>termination</u> of an emergency classification. Discuss proposed downgrades or termination with the Site Director.		____/____

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Fort Calhoun Station
Unit No. 1

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EPIP-RR-17A

EMERGENCY PLAN IMPLEMENTING PROCEDURE

Title: TSC ADMINISTRATIVE LOGISTICS COORDINATOR ACTIONS

FC-68 Number: 53309

Reason for Change: Revise format, delete redundant steps. Add step to use east entrance. Changes CID to AR. Delete names of oil suppliers.

Initiator: Mark Reller

Preparer: Mark Reller

TSC ADMINISTRATIVE LOGISTICS COORDINATOR ACTIONS

1. PURPOSE

1.1 The purpose of this procedure is to provide guidance to the TSC Administrative Logistics Coordinator in performing actions outlined in the Emergency Plan Implementing Procedures (EPIPs).

2. REFERENCES/COMMITMENT DOCUMENTS

2.1 Commitment Documents

- AR 13301, IER 92-20, Attachment 6.1, Step 5

3. DEFINITIONS

None

4. PREREQUISITES

None

5. PROCEDURE

5.1 Review the procedure and checklist, Attachment 6.1 and accomplish the applicable steps both upon initial activation and periodically, as required, thereafter.

5.2 At the completion of the shift or at event termination, check the steps which are completed.

5.3 Retain all documentation (logs, calculation sheets, notes, etc) generated or used during the emergency.

5.4 At the termination, every position in the TSC, OSC and CR will deliver documentation to you.

5.4.1 Assemble all documentation for legal records and event analysis. Request the Emergency Planning Department to place in safe storage.

6. ATTACHMENTS

6.1 TSC Administrative Logistics Coordinator Checklist

6.2 Procurement or Addition of Diesel Fuel for Emergency Diesel Generators

ATTACHMENT 6.1

TSC ADMINISTRATIVE LOGISTICS COORDINATOR CHECKLIST

*** * Maintain a log of all key activities * ***

		INITIALS
1.	Sign in on the Accountability Roster, obtain worker packet and put on the Personnel Identification Badge.	_____
2.	Direct one Site Director Secretary to maintain a log for the Site Director and gather information for input to the ERMS.	_____
3.	Direct the other Site Director Secretary to operate the ERMS.	_____
4.	Direct the TSC EP Specialist to record priorities on the Write Board.	_____
5.	Direct the TSC EP Specialist to operate the COP phone, and maintain the Radiological Status Board. [AR 13301]	_____
6.	Direct the TSC Status Board Keeper to obtain data from the ERFCS or Control Room to maintain the TSC Status Board.	_____
7.	Direct the TSC EP Specialist to assist all TSC positions with obtaining necessary Emergency Plan documents, equipment, and other resources as needed.	_____
8.	Direct one TSC Administrative Assistant to maintain the TSC Accountability Roster for those entering and leaving the TSC at the east doors of the TSC.	_____
9.	Secure access/egress to the TSC from the back (west) entrance using the following signs: • TSC IS ACTIVATED NO EXIT • TSC IS ACTIVATED AUTHORIZED PERSONNEL ONLY • WHEN TSC IS ACTIVATED DO NOT ENTER. USE EAST ENTRANCE	_____
10.	Direct one TSC Administrative Assistant to perform copying/distribution duties in the TSC and to operate the fax machine.	_____

ATTACHMENT 6.1
(Continued)

*** * Maintain a log of all key activities * ***

		(√)	INITIALS
11.	Determine 24-hour staffing for your position and assist Site Director in determining schedule for all TSC positions: (use Form EPF-10, as necessary).		_____
12.	Prepare a 24-hour staffing for Control Room positions (using FC-EPF-10) and fax them a copy when completed.		_____
13.	Contact the OSC and direct them to prepare a 24-hour staffing schedule for OSC positions (using FC-EPF-9) and fax a copy to you when completed.		_____
14.	When all 24-hour staffing schedules have been submitted, direct the preparation of the TSC, OSC, and Control Room Shift Schedules and rosters for posting and distribution in those facilities.		_____
15.	Initiate a call to scheduled personnel to inform them of the shift schedules using other personnel to assist, as necessary.		_____
16.	Periodically review the following steps and perform, as required:		
16.1	Prepare copies of data sheets and messages and ensure their distribution throughout the TSC, and transmission to the OSC, as required.	____	
16.2	Assist the Site Director and TSC Director, as necessary.	____	
16.3	Contact the EOF Administrative Logistics Manager when an evacuation of plant personnel to the North Omaha Station occurs.	____	
16.4	Contact the EOF Administrative Logistics Manager when any person is injured or contaminated, and requires offsite medical response.	____	

ATTACHMENT 6.1
(Continued)

*** * Maintain a log of all key activities * ***

(√) INITIALS

NOTE: Steps 16.5 and 16.6 concering diesel fuel oil may be performed by the EOF Administrative Logistics Manager if necessary. If so, provide all information as needed by telephone and/ or fax network during the turnover process.

16.5 Determine from the Control Room Coordinator through the TSC Operations Liaisons the operating status of the emergency diesel generators. If either or both are operating, and it appears likely that they will continue to operate due to the accident condition, commence actions to start fuel oil deliveries to the site. See Attachment 6.2 for diesel fuel supply information. ____

16.6 In the event that diesel fuel oil cannot be delivered to the site within 20 hours of the start of the diesel(s), actions should be taken to provide a temporary fuel oil transfer system from the Auxiliary Boiler Fuel Oil Tank, FO-10, to the Diesel Generator Fuel Oil Tank, FO-1. Contact the TSC Director and/or the Site Director and request that an emergency maintenance work order be implemented to install the hardware described on Attachment 6.2. ____ ____

17. Coordinate logistics support (e.g. transportation, lodging, food, special equipment and supplies purchase, etc) as necessary. ____

18. Provide a detailed briefing to your shift relief of any actions taken and the current emergency status. ____

19. At emergency termination, collect all documentation (logs, calculation sheets, notes, etc) generated or used during the emergency. Ensure the TSC is placed back into a readiness condition to ensure re-activation can take place, as necessary. ____

ATTACHMENT 6.2

PROCUREMENT OR ADDITION OF DIESEL FUEL FOR EMERGENCY DIESEL GENERATORS

INITIALS

1. Refer to emergency phone book for phone number of diesel fuel supplier in the Offsite Support Agencies section. _____

2. DIESEL FUEL TRANSFER FROM FO-10 TO FO-1 (Auxiliary Boiler Fuel Storage Tank to Diesel Generator Fuel Oil Storage Tank)

NOTE: At full rated power, each diesel generator consumes approximately 3 gallons per minute. FO-37 delivers approximately 6 gallons per minute. If only one diesel is in service, or if the diesels are running at less than rated load, the level in FO-1 will steadily increase when adding fuel oil to FO-1 from FO-10.

There are several possible methods to transfer diesel fuel from FO-10 to FO-1. This method allows using installed equipment that will require a minimum amount of "temporary" changes to accomplish the fuel transfer:

2.1 Connect a 1 inch hose from FO-201 "Auxiliary Feedwater Pump FW-54 Fuel Oil Transfer Pump FO-37 Discharge Drain Valve" to the 3 inch fill connection on FO-1. This will require approximately 400 feet of hose. The 1 inch hose may be run inside the 3 inch fill connection and duct taped in place. All mechanical joints should be stabilized with lock wires and taped to prevent leakage. Sleeves or blocks should be used around hoses that are run through doors to prevent damage to the hose. (Hose fittings and a hand pump are available in the warehouse stored under Stock Code Number 30869-2(fuel)). _____

2.2 The normal Auxiliary Feedwater Pump fuel oil system lineup in OI-AFW-1 can be used, but HC-FO-37 must be placed in the "Hand" position, or it will automatically shut off when the Fuel Oil Day Tank FO-38 is full. Also, FO-196 must be closed or fuel will recirculate through FO-38 back to FO-10 if that is the path of least resistance. FO-38 should be checked and refilled periodically; it contains an 8 hour supply of fuel oil when full. _____

2.3 Continue to monitor LI-2107 and shut off the transfer pump when FO-1 level is approximately 17,500 gallons. _____

2.4 Upon completion of the fuel transfer evolution, drain and store hose properly to prevent possible fuel jelling in the hose. _____

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Fort Calhoun Station
Unit No. 1

EPIP-RR-22

EMERGENCY PLAN IMPLEMENTING PROCEDURE

Title: PROTECTIVE MEASURES COORDINATOR / MANAGER ACTIONS

FC-68 Number: 53201

Reason for Change: Revise format, Change CID to AR, delete note, ensure FC-1188 requirements are the same as OSC-2 and OSC-15, delete reference to TSC Dose Assessment Coordinator.

Contact Person: Mark Reller

PROTECTIVE MEASURES COORDINATOR / MANAGER ACTIONS

NON-SAFETY RELATED

1. PURPOSE

1.1 The purpose of this procedure is to provide guidance to the Protective Measures Coordinator and the Protective Measures Manager in performing actions in response to an emergency at Fort Calhoun Station.

2. REFERENCES/COMMITMENT DOCUMENTS

2.1 EPIP-EOF-6, Dose Assessment

2.2 EPIP-EOF-7, Protective Action Guidelines

2.3 EPIP-EOF-21, Potassium Iodide Issuance

2.4 EPIP-EOF-11, Dosimetry Records, Exposure Extensions and Habitability

2.5 EPIP-OSC-20, Site Population Exposure Estimates

2.6 EPIP-TSC-1, Activation of the Technical Support Center

2.7 CR 199500262

2.8 Commitment (Other than Ongoing)

- AR 13302, IER-92-20, Closed
- AR 11809, LIC-91-189R, Closed
- AR 13301, IER-92-20, Closed

3. DEFINITIONS

None

4. PREREQUISITES

None

5. PROCEDURE

NOTE: When needed, complete dose assessments and updates to the states at least every 60 minutes. It is the goal of the Fort Calhoun Station to attempt to provide assessments and updates at 15 minute intervals. (AR 13302)

5.1 The Protective Measures Coordinator will use Attachment 6.1 as an aid to completing required actions.

5.2 The Protective Measures Manager will use Attachment 6.2 as an aid to completing required actions.

5.3 Review the procedure and appropriate checklists, and accomplish the applicable steps both upon initial activation and periodically, as required, thereafter.

5.4 Retain all documentation (logs, calculation sheets, notes, etc.) generated or used during the emergency. At the termination, deliver all documentation to the Administrative Logistics Manager in the EOF, or the TSC Administrative Logistics Coordinator in the TSC.

6. ATTACHMENTS

6.1 Protective Measures Coordinator Checklist

6.2 Protective Measures Manager Checklist

ATTACHMENT 6.1

PROTECTIVE MEASURES COORDINATOR CHECKLIST

* * Maintain a log of all key activities * *

	√	INIT/TIME
1. Sign in on the Accountability Roster, obtain worker packet and put on the Personnel Identification Badge.		____/____
2. Interface with the C.R. Dose Assessment to determine the status of dose assessment.		____/____
3. Assign and brief Field Teams.		____/____
4. Assess any planned radiological releases for potential impact to the public. Notify the states of Nebraska (Emergency Management Agency) and Iowa (Emergency Management Division) prior to starting any release by using the CHP phone or regular telephone.		____/____
5. Interface with the Radiation Protection Coordinator to determine the status of plant radiological conditions and response efforts.		____/____
6. Report the status of plant radiological conditions, in-plant response, dose assessment and Field Team response efforts to the Site Director/TSC Director.		____/____
7. Assist with activation of the TSC using EPIP-TSC-1.		____/____
8. If a release is in progress or suspected, and the release path is not immediately known, request an assessment team (i.e., Operations, Engineering, Dose Assessment personnel) be assigned by the Site Director or TSC Director. Coordinate with the team to ensure that they: (AR 11809)		
8.1 Verify that a release is actually in progress.	___	
8.2 Determine the source and release path of any release in progress.	___	
8.3 Report any result to you.	___	____/____

ATTACHMENT 6.1
(Continued)

NOTE: Although it is the Command and Control Position's duty to ensure that Emergency Notification Forms (FC-1188) are accurate, approved and issued per the requirements of EPIP-OSC-2, your position should assist in ensuring that these requirements are met.

		✓	INIT/TIME
9.	Update the states/counties as follows:		
9.1	If dose assessment is being performed:		
9.1.1	Review the current assessment results.	___	
9.1.2	Assign PARs for the assessment results per EPIP-EOF-7.	___	
9.1.3	Review the classification level and prognosis shown on the assessment.	___	
9.1.4	Sign the assessment (as reviewer if command and control is in TSC) and forward to the Site Director for approval.	___	
9.1.5	Assure approved dose assessment is faxed to states and EOF.	___	
9.1.6	Ensure the Radiological Status Board is updated with the assessment results by the Emergency Planning Specialist. (AR 13301)	___	____/____
9.2	If dose assessment is not being performed:		
9.2.1	As requested, assist the Command and Control Position in completing a Emergency Notification Form (FC-1188).	___	
9.2.2	As requested forward approved Emergency Notification Form to the Emergency Planning Specialist for state/county update.	___	

ATTACHMENT 6.1
(Continued)

	✓	INIT/TIME
10. If required, contact the states and counties via the Conference Health Physics (CHP) network and the NRC via the Health Physics Network (HPN) to provide radiological information.		/
11. If required, coordinate protective measures approval for the Field Teams and in-plant teams. Use EPIP-EOF-21, EPIP-OSC-20 and EPIP-EOF-11.		/
12. Provide periodic updates on radiological conditions to the Site Director/TSC Director and staff.		/
13. If required, provide detailed briefing to oncoming shift relief of emergency conditions and status of any actions taken.		/

ATTACHMENT 6.2

PROTECTIVE MEASURES MANAGER CHECKLIST

* * Maintain a log of all key activities * *

	√	INIT/TIME
1. Obtain and put on Position Identification Badge.		____/____
2. Interface with the EOF Dose Assessment Coordinator or TSC Protective Measures Coordinator to determine the status of dose assessment/Field Team response.		____/____
3. Interface with the TSC Protective Measures Coordinator to determine the status of onsite radiological conditions and actions of in-plant teams.		____/____
4. Report the status of dose assessment, Field Team response, onsite radiological conditions and in-plant team response to the Emergency Director.		____/____
5. Upon arrival, brief the Site Representative and MRC Technical Liaison using the following as a guideline:		
• The event	___	
• Status of the plant	___	
• Radiological concerns	___	
• Protective Action Recommendations given to the state(s).	___	
5.1 Instruct the Site Representative to obtain a copy of the plant P&IDs.	___	
5.2 Dispatch the Site Representative to the Iowa State EOC.	___	
5.3 Dispatch the MRC Technical Liaison to the MRC.	___	____/____
6. Initiate action to transfer dose assessment to the EOF as soon as possible.		____/____

NOTE: Although it is the Command and Control Position's duty to ensure that that Emergency Notification Forms (FC-1188) are accurate, approved and issued per the requirements of OSC-2, your position should assist in ensuring that these requirements are met.

		√	INIT/TIME
7.	Update the states/counties as follows:		
7.1	If dose assessment is being performed:		
7.1.1	Review the current assessment results.	___	
7.1.2	Assign PARs for the assessment results per EPIP-EOF-7.	___	
7.1.3	Review the classification level and prognosis shown on the assessment.	___	
7.1.4	Sign the assessment (as reviewer) and forward to the Emergency Director for approval.	___	
7.1.5	Return the approved assessment to the EOF Dose Assessment Coordinator for transmittal to the states.	___	____/____
7.2	If dose assessment is not being performed:		
7.2.1	As requested, assist the Command and Control Position in completing a Emergency Notication Form (FC-1188).	___	
7.2.2	As request forward approved Emergency Notification Form to the Emergency Response Coordinator for state/county update.	___	____/____
8.	If required, contact the states and counties via the Conference Health Physics (CHP) network and the NRC via the Health Physics Network to provide radiological information.		____/____
9.	If required, coordinate the protective measures process for the Field Teams and in-plant teams. Use EPIP-EOF-21, EPIP-OSC-20 and EPIP-EOF-11 as necessary.		____/____

(Continued)

	✓	INIT/TIME
10. Provide periodic updates on radiological conditions to the Emergency Director and staff.		/
11. If requested by the states, call in OPPD Environmental personnel.		/
12. If Fort Calhoun Station is evacuated, coordinate the arrival of evacuees, with the assistance of the Administrative Logistics Manager.		/
13. If required, evaluate evacuated site population exposure using EPIP-OSC-20.		/
14. If required, provide detailed briefing to oncoming shift relief of emergency conditions and status of any actions taken.		/

WP8

Fort Calhoun Station
Unit No. 1

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EPIP-RR-22A

EMERGENCY PLAN IMPLEMENTING PROCEDURE

Title: CHEMISTRY COORDINATOR ACTIONS

FC-68 Number: 53202

Reason for Change: Delete reference to Chemistry Liaison. Reformat per Writers Guide, change to OSC Director the position primary contact with the TSC.

Contact Person: Mark Reller

ISSUED: 02-29-00 3:00 pm

R5

CHEMISTRY COORDINATOR ACTIONS
NON SAFETY RELATED

1. PURPOSE

   1.1 The purpose of this procedure is to provide guidance to the Operations Support Center's Chemistry Coordinator.

2. REFERENCES/COMMITMENT DOCUMENTS

   2.1 EPIP-OSC-9, Emergency Team Briefings

   2.2 EPIP-OSC-21, Activation of the Operations Support Center

   2.3 EPIP-EOF-11, Dosimetry Records, Exposure Extensions, and Habitability

3. DEFINITIONS

   None

4. PREREQUISITES

   None

5. PROCEDURE

   5.1 Use the Chemistry Coordinator's Checklist, Attachment 6.1, as an aid to completing required actions.

NOTE: The attached checklist is designed as a reminder of actions which are required to be performed during an emergency condition.

   5.2 Review the procedure and checklist, and accomplish the applicable steps both upon initial activation and periodically, as required, thereafter.

   5.3 Retain all documentation (logs, calculation sheets, notes, etc.) generated or used during the emergency. At the termination, deliver all Chemistry Group documentation to the TSC Administrative Logistics position in the TSC.

6. ATTACHMENTS

   6.1 Chemistry Coordinator's Checklist

Attachment 6.1 - Chemistry Coordinator's Checklist

Page 1 of 2

*** * Maintain a log of all key activities * ***

	✓	INIT/TIME
1. Sign in on the OSC Accountability Roster, obtain worker packet and put on Personnel Identification Badge.		____/____
2. Assist as required in set up of the OSC per EPIP-OSC-21.		____/____
3. Update the Personnel Assignment Board with the names of current Chemistry personnel.		____/____
4. Periodically review the following steps and perform as required:		
4.1 Coordinate chemistry activities and appropriate personnel during the emergency per Fort Calhoun Station procedures including:		
4.1.1 PASS Sampling	___	
4.1.2 Toxic Gas Sampling	___	
4.1.3 Routine Chemistry Sampling	___	
4.1.4 Hazardous Material	___	____/____
4.2 Coordinate Controlled Radiological Releases to the environment and ensure that compliance with federal and state authorities and regulations are met.		____/____
4.3 Assist the OSC Director in forming emergency teams for medical response, damage control and accident mitigation.		____/____
4.4 Interface with the OSC Director to ensure proper follow-up on samples, as directed by the TSC.		____/____
4.5 Interface with the Radiation Protection Coordinator and Maintenance Coordinator as required to complete briefings for all teams dispatched from the OSC per EPIP-OSC-9.	___	____/____

4.6 Coordinate administrative exposure limit increases as necessary for the Chemistry Coordinator group per EPIP-EOF-11. ___ _____/____

5. Provide a detailed briefing to your shift relief of any actions taken and the current emergency status. _____/____

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Unit No. 1

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EPIP-RR-25

EMERGENCY PLAN IMPLEMENTING PROCEDURE

Title: EOF DOSE ASSESSMENT COORDINATOR ACTIONS

FC-68 Number: 53198

Reason for Change: Rename procedure, revise format, delete duties (Attach 6.1) of TSC Dose Assess Coordinator. Change CID to AR.

Contact Person: Mark Reller

EOF DOSE ASSESSMENT COORDINATOR ACTIONS
NON SAFETY RELATED

1. PURPOSE

   1.1 The purpose of this procedure is to provide guidance to the EOF Dose Assessment Coordinator in performing actions in response to an emergency at Fort Calhoun Station.

2. REFERENCES/COMMITMENT DOCUMENTS

   2.1 EPIP-EOF-6, Dose Assessment

   2.2 EPIP-EOF-7, Protective Action Guidelines

   2.3 EPIP-EOF-21, Potassium Iodide Issuance

   2.4 EPIP-EOF-11, Dosimetry Records, Exposure Extensions and Habitability

   2.5 EPIP-OSC-20, Site Population Exposure Estimates

   2.6 Commitment Documents

   - AR 13302, IER-92-20

3. DEFINITIONS

   None

4. PREREQUISITES

   None

5. PROCEDURE

5.1 The EOF Dose Assessment Coordinator will use Attachment 6.1 as an aid to completing required actions.

NOTE: When needed, perform dose assessments and updates to the states at least every 60 minutes. It is the goal of the Fort Calhoun Station to attempt to provide assessments and updates at 15 minute intervals. (AR 13302)

5.2 Use Attachment 6.2 as guidance in comparing Field Team data to dose assessment data.

5.3 Review the procedure and appropriate checklists, and accomplish the applicable steps both upon initial activation and periodically, as required, thereafter.

5.4 Retain all documentation (logs, calculation sheets, notes, etc.) generated or used during the emergency. At the termination, deliver all documentation to the Administrative Logistics Manager in the EOF.

6. ATTACHMENTS

6.1 EOF Dose Assessment Coordinator Checklist

6.2 Comparison of Field Team Data to Dose Assessment Data

ATTACHMENT 6.1

INIT/TIME

EOF DOSE ASSESSMENT COORDINATOR CHECKLIST

* * Maintain a log of all key activities * *

1. Obtain and put on position identification badge. ____/____

2. IF dose assessment is being performed at the EOF, THEN proceed to Step 5. Otherwise, go to Step 3. ____/____

3. Review any dose assessment transmittals that have been faxed to the EOF from the plant site. ____/____

4. Instruct the EOF Dose Assessment Specialist to determine dose assessment status from the plant site and standby for transfer of dose assessment to the EOF. ____/____

5. If required, direct the transfer of dose assessment from the plant site to the EOF as follows:

   5.1 Determine from the Protective Measures Manager when the transfer of Command and Control is to take place.

   5.2 Inform the EOF Dose Assessment Specialist of the time that the transfer of Command and Control is to take place.

   5.3 At the time of transfer, ensure the person performing dose assessment at the plant site is directed to log off the EAGLE computer.

   5.4 At the time of transfer, ensure the EOF Dose Assessment Specialist is directed to log on EAGLE and commence performing dose assessment. ____/____

6. IF Field Team direction from the EOF is already in progress, THEN proceed to Step 8. Otherwise, go to Step 7. ____/____

7. Contact the TSC Protective Measures Coordinator to determine the status of the Field Teams. ____/____

ATTACHMENT 6.1 (continued)

INIT/TIME

8. Determine the status of Field Teams from the EOF Field Team Specialist. ____/____

9. Periodically report the status of dose assessment and Field Team response to the EOF Protective Measures Manager. ____/____

10. When data becomes available, perform dose assessment and Field Team data comparisons per Attachment 6.2. ____/____

11. Contact the National Weather Service to obtain a 24 hour forecast, and determine the potential impact to dose assessment and Field Team operations. ____/____

12. If required, contact the states and counties via the Conference Health Physics (CHP) network and the NRC via the Health Physics Network to provide radiological information. ____/____

13. If required, coordinate the protective measures process for the Field Teams. Use EPIP-EOF-21, EPIP-OSC-20 and EPIP-EOF-11 as necessary. ____/____

14. If required, provide detailed briefing to oncoming shift relief of emergency conditions and status of any actions taken. ____/____

ATTACHMENT 6.2

COMPARISON OF FIELD TEAM DATA TO DOSE ASSESSMENT DATA

NOTE: This procedure should be used once Field Team results are available to determine if projected dose data compares to actual field measurements. This will allow plant supervision to adjust Protective Action Recommendations and Emergency Action Levels if necessary.

1. Obtain FC-EPF-27 Form(s).

2. Collect and record the following data:

   2.1 Date and time

   2.2 Field Team location

   2.3 Approximate Field Team distance from site

   2.4 Waist level dose rate (Rem/hr) reported from the Field Team

   2.5 Iodine concentration (μCi/cc) reported from the Field Team

   2.6 Request the Dose Assessment Specialist to perform the following:

      (1) For the current plume segment, proceed to the EAGLE Output Menu

      (2) Enter "4" for Field Team Data

      (3) Select the proper sector for the Field Team location

      (4) Press <PRINT SCREEN> to print the Field Team data

   2.7 Locate the Emergency Monitor location that coincides with the Field Team location from 2.2) above.

   2.8 Record the projected Field Team Dose Rate and Iodine 131 concentration on the FC-EPF-27.

   2.9 Report results to the Protective Measures Coordinator/Manager.

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Fort Calhoun Station
Unit No. 1

EPIP-RR-72

EMERGENCY PLAN IMPLEMENTING PROCEDURE

Title: FIELD TEAM SPECIALIST ACTIONS

FC-68 Number: 53197

Reason for Change: Revise Format. Change Reference to "TSC Dose Assessment Coord" to "TSC Protective Measures Coordinator". Delete Note.

Contact Person: Mark Reller

FIELD TEAM SPECIALIST ACTIONS

NON-SAFETY RELATED

1. PURPOSE

   1.1 The purpose of this procedure is to provide guidance to the EOF Field Team Specialist in performing actions in response to an emergency at Fort Calhoun Station.

2. REFERENCES/COMMITMENT DOCUMENTS

   2.1 EPIP-EOF-3, Offsite Monitoring

   2.2 FC-EPF-2, Offsite Monitor Log

   2.3 EPIP-OSC-20, Site Population Exposure Estimates

   2.4 S.W. Gebers, CHP. ESTIMATES OF TOTAL EFFECTIVE DOSE EQUIVALENT: USING DIRECT READING DOSIMETERS. December, 1993.

3. DEFINITIONS

   None

4. PREREQUISITES

   None

5. PROCEDURE

5.1 The EOF Field Team Specialist will use Attachment 6.1 as an aid to completing required actions.

5.2 Use Attachment 6.2 as guidance in directing Field Teams.

5.3 Review the procedure and appropriate checklists, and accomplish the applicable steps both upon initial activation and periodically, as required, thereafter.

5.4 Retain all documentation (logs, calculation sheets, notes, etc.) generated or used during the emergency. At the termination, deliver all documentation to the Administrative Logistics Manager in the EOF.

6. ATTACHMENTS

6.1 EOF Field Team Specialist Checklist

6.2 Plume Tracking Techniques

ATTACHMENT 6.1

EOF FIELD TEAM SPECIALIST CHECKLIST

*** * Maintain a log of all key activities * ***

	✓	INIT/TIME
1. Obtain and put on Position Identification Badge.		/
2. Contact the TSC Protective Measures Coordinator to receive briefing on status of field team activation, meteorological data, and radiological conditions.		/
3. When Field Teams initiate a radio check, direct the teams to standby for further direction.		/
4. Brief the Field Teams on plant conditions and projected/known radiological conditions.		/
5. Instruct the Field Teams to closely observe dosimeter readings and to immediately report if any dosimeters are approaching 150 mRem.		/
6. Periodically review the following steps and perform, as required:		
6.1 Keep the Field Teams updated on plant conditions and projected/known radiological conditions.	___	
6.2 Coordinate with the EOF Dose Assessment Coordinator to direct the Field Teams to appropriate monitoring locations.	___	
6.3 Record survey results and dosimeter readings from teams using FC-EPF-2.	___	/

✓ INIT/TIME

6.4 If any field team dosimeter readings approach or reach 150 mRem prior to performing a TEDE calculation, perform the following:

6.4.1 Instruct the teams to exit the area and report to either the EOF or plant site, as determined by the EOF Dose Assessment Coordinator. ___

6.4.2 Initiate an estimated TEDE determination for the team using EPIP-OSC-20. ___

A. **IF** an estimated TEDE cannot be calculated due to lack of data, **THEN** go to Step 3. ___

B. **IF** the estimated TEDE is greater than 1 Rem, **THEN** go to Step 3. ___

C. If the estimated TEDE is less than 1 Rem, team may again be dispatched upon approval from the Protective Measures Manager. ___

6.4.3 Initiate replacement of the team and a dosimetry/bioassay evaluation for the team through the EOF Dose Assessment Coordinator. ___ _____/_____

6.5 Use EPIP-OSC-20 to calculate estimated TEDE for the field teams, and inform them of the results

6.5.1 If an estimated TEDE is greater than 1 Rem:

A) Instruct the teams to exit the area and report to either the EOF or plant site, as determined by the EOF Dose Assessment Coordinator. ___

B) Initiate replacement of the team and dosimetry/bioassay evaluation for the team through the EOF Dose Assessment Coordinator. ___

6.5.2 If an estimated TEDE is less than 1 Rem, team may continue. _____/_____

ATTACHMENT 6.1
(Continued)

	✓	INIT/TIME
6.6 Post OPPD field team survey results.		/
6.7 Submit completed FC-EPF-2 forms to the EOF Dose Assessment Coordinator for review and comparison to EAGLE data.		/
7. Provide detailed briefing to oncoming shift relief of emergency conditions and status of field team monitoring.		/

ATTACHMENT 6.2

PLUME TRACKING TECHNIQUES

✓ INIT/TIME

NOTE: Gamma radiation, above normal background, with no beta component may indicate the presence of a nearby elevated or horizontally displaced plume. A significant difference between open and closed window readings probably indicates immersion in the plume as the most energetic beta particle expected (3 MeV) would travel approximately 30 feet in air.

NOTE: An open air ion chamber becomes internally contaminated with noble gas after immersion in the plume for a short time. This condition gives the appearance of a "Gamma only response" (no difference between open and closed window). In this case, confirm background gamma radiation levels with GM detectors or other sealed chamber survey instruments.

1. If time and roadways allow, dispatch one team to a downwind location to intercept the projected center line of the plume and have them standby with dose rate instruments on. _____/_____

2. Dispatch the second team closer to the plant to continuously traverse the projected plume path with instruments on. Direct this team to notify you immediately upon locating the actual centerline. After the centerline has been located, direct the team to transverse the plume to determine the plume boundaries. _____/_____

ATTACHMENT 6.2
(Continued)

	✓	INIT/TIME

NOTE: As time to compare actual and projected dose is critical, give consideration to the roadway network and direct sampling by the team which can be placed closest to the centerline in the least amount of time.

3. Use the overlay map and plot the centerline path. As needed, move the first team to intercept the actual centerline and to take surveys as close to the centerline as dose rates and roadways allow. _____ / _____

4. After the centerline surveys have been taken, direct the teams to determine the plume edges and remain outside the plume. Place teams on either side of the plume and periodically monitor the plume boundaries to ensure wind shift has not occurred. _____ / _____

5. Based on radiological conditions and changes in plant status, additional surveys may be taken to confirm dose assessment projections. _____ / _____

6. After plume passage and release termination, determine the following:

   6.1 Boundaries of ground deposition ___

   6.2 Beta and gamma dose rates from ground deposition ___

   6.3 Surface contamination levels ___ _____ / _____

RADIOLOGICAL EMERGENCY RESPONSE PLAN INDEX
RERP

PROCEDURE NUMBER	TITLE	REVISION/DATE
RERP	Definitions and Abbreviations	R14 01-27-00
RERP-SECTION A	Assignment of Organizational Responsibility (Organizational Control)	R11 02-27-97a
RERP-SECTION B	Organizational Control of Emergencies	R24 02-29-00
RERP-SECTION C	Emergency Response Support and Resources	R9 09-30-98
RERP-SECTION D	Emergency Classification System	R9 04-29-97a
RERP-SECTION E	Notification Methods and Procedures	R22 10-20-98
RERP-SECTION F	Emergency Communications	R14 09-09-99
RERP-SECTION G	Public Education and Information	R10 03-11-97a
RERP-SECTION H	Emergency Facilities and Equipment	R28 02-29-00
RERP-SECTION I	Accident Assessment	R11 09-02-99
RERP-SECTION J	Protective Response	R16 01-06-00
RERP-SECTION K	Radiological Exposure Control	R9 02-03-00
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RERP-SECTION M	Recovery and ReEntry Planning and Post Accident Operations	R14 03-11-97a
RERP-SECTION N	Exercises and Drills	R12 10-28-99
RERP-SECTION O	Radiological Emergency Response Training	R13 09-23-97a
RERP-SECTION P	Responsibility for the Planning Effort: Development, Periodic Review and Distribution	R10 10-23-97

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Fort Calhoun Station
Unit No. 1

RERP-SECTION B

RADIOLOGICAL EMERGENCY RESPONSE PLAN

Title: ORGANIZATIONAL CONTROL OF EMERGENCIES

FC-68 Number: 53194

Reason for Change: Delete TSC Dose Assessment Coord and Chemistry Liaison positions. Change Resolution number. Change CID numbers to AR numbers.

Contact Person: M. Reller

ORGANIZATIONAL CONTROL OF EMERGENCIES

1. ONGOING COMMITMENT DOCUMENTS

- AR11390, LIC-065R

2. ERO STAFF ON SHIFT

2.1 The staffing of the normal operating organization for each shift is shown in Table B-1. This staffing consists of, as a minimum, a Shift Manager (Senior Reactor Operator); a Senior Reactor Operator; two Reactor Operators; three in-plant operators; a Chemistry Technician; a Radiation Protection Technician; and a Shift Technical Advisor. Additionally, there are several shift Security personnel assigned.

All or part of these shift personnel may comprise the initial ERO, and are responsible for taking immediate protective measures in any emergency and implementing this Radiological Emergency Response Plan when necessary.

3. ACTIVATION OF THE ERO AUGMENTING THE SHIFT STAFF

3.1 At a Notification of Unusual Event (NOUE), the Shift Manager may elect to not activate the ERO. In this instance, a notification to certain management personnel is performed and other personnel may be notified to assist as necessary.

If the Shift Manager elects to activate the ERO, the notification process will call out the entire ERO (with the exception of the MRC) for augmentation of the shift staff.

3.2 Key ERO positions are identified in Table B-1. It is OPPD's goal that the ERO personnel can staff their emergency positions within one hour following declaration of an Alert or higher classification. In the event of adverse weather and/or other conditions that may limit or slow response, either manmade or natural, it is understood that staffing time may exceed this goal.

4. FACILITY ACTIVATION AND OPERATION

4.1 There are some functional group activities that may be performed within an Emergency Response Facility prior to actually activating the facility. To be beneficial to the Command and Control facility, these activities, such as dose assessment and field team functions, are dependent upon the establishment of proper communications between the facilities.

4.2 OPPD Emergency Response Facilities are considered activated when minimum staffing and basic setup requirements have been attained to allow the facility to provide minimum support to the operating staff and other facilities.

It is OPPD's goal that the OSC and TSC be activated within one hour following an Alert classification, and that the EOF be activated within one hour following a Site Area or General Emergency classification. The MRC will be activated following a Site Area or General Emergency classification, and can be activated at an earlier classification based on the decisions of the Corporate Communications Division.

4.3 Minimum staffing for activation of the OSC is as follows: 1) one of the following to assume the duties of OSC Director; an OSC Director, a Radiation Protection Coordinator, a Chemistry Coordinator or a Maintenance Coordinator, 2) a Radiation Protection Technician; and, 3) one other person to form a team.

4.4 Minimum staffing for activation of the TSC is as follows: 1) a Site Director; 2) a TSC EP Specialist; 3) a TSC Operations Liaison; 4) a TSC Protective Measures Coordinator and 5) a Reactor Safety Coordinator. **[AR 11390]**

4.5 Minimum staffing for activation of the EOF is as follows: 1) an Emergency Director; 2) an EOF Emergency Response Coordinator; 3) an EOF Operations Liaison; 4) an EOF Protective Measures Manager or EOF Dose Assessment Coordinator; 5) an EOF Information Specialist; 6) an EOF Administrative Logistics Manager; and, 7) an EOF Dose Assessment Specialist. **[AR 11390]**

4.6 OPPD Emergency Response Facilities are considered operational when the Command and Control position or center director responsible for each facility is confident that the facility has adequate equipment and personnel resources necessary to provide full support to the specific emergency.

4.7 If a toxic chemical/hazardous material or other significant event occurs that threatens the habitability of the station, an option exists to have all or part of the TSC and OSC staffs report to the EOF to provide assistance as necessary.

4.8 Some ERO personnel may elect to maintain an assistant position at their station. This is an acceptable action when additional coordination of activities is required or to aid in the turnover process. The primary assignee must maintain overall responsibility of the position, and ensure that 24 hour staffing of the position can be implemented.

5. ERO RESPONSIBILITIES

5.1 OPPD has issued a resolution which authorizes the ERO to provide the immediate and decisive response as necessary to mitigate the consequences of any nuclear emergencies and for protection of the health and safety of the public. Resolution No. 4731, as approved by the Board of Directors on January 15, 1998, is Appendix D of this plan.

5.2 The ERO is intended to provide a pre-qualified organization capable of fulfilling the actions described above. The ERO is not confined to utilize only those personnel that are currently listed as qualified. Other OPPD personnel may be assigned and utilized to perform necessary functions at the discretion of the Command and Control positions. Assignment of any non-ERO qualified individual(s) should include adequate instruction to ensure the individual(s) is capable of performing the necessary functions and is knowledgeable of any potential hazards associated with responding to the designated facility.

6. COMMAND AND CONTROL RESPONSIBILITIES

6.1 The position performing the duties of the Emergency Director is referred to as the "Command and Control Position."

6.2 The Command and Control position has the following responsibilities that cannot be delegated to other personnel. The position may assign other personnel to assist in conducting the actions necessary, but the responsibility of their completion rests with the position, until relieved by another Command and Control position or qualified individual, or the emergency is terminated:

6.2.1 Overall command and control of the ERO.

6.2.2 Ensuring that the proper classification of the emergency has been made in accordance with the established EAL/Classification scheme and is periodically reviewed to determine if the classification should be upgraded, downgraded or terminated.

6.2.3 Ensuring that all required notifications are made to appropriate state, local and federal officials.

6.2.4 Ensuring that appropriate Protective Action Recommendations (PARs) are provided to offsite officials.

6.2.5 Authorizing OPPD emergency worker exposure extensions beyond the Federal Radiation Protection Guidance.

6.2.6 Authorizing issuance of Potassium Iodide for OPPD emergency workers.

6.3 The Command and Control position also has the following responsibilities that can be delegated to other personnel, as necessary:

6.3.1 Requests for assistance from federal agencies.

6.3.2 Authorizing any emergency information to be released to the media or the general public.

6.3.3 Coordinating the transfer of the emergency information from the ERO to other OPPD and non-OPPD organizations called upon to assist.

6.3.4 Ensuring a timely and complete turnover of information to any qualified relief.

6.3.5 Declaring the termination of an emergency and transfer into a Recovery Operations Organization, when appropriate.

6.3.6 Providing information to the authorized representatives of the states of Nebraska and Iowa, and associated local governments.

6.3.7 Ensuring that the plant is in compliance with Technical Specifications and other licensee conditions, and if deviations are necessary to protect the public health and safety, they are approved, as a minimum, by a Senior Licensed Operator, prior to taking the action.

7. COMMAND AND CONTROL POSITIONS

7.1 The positions that have Emergency Director authority are: 1) the Shift Manager, 2) the Control Room Coordinator, 3) the Site Director and 4) the EOF Emergency Director.

7.2 The Shift Manager duties are to: 1) perform as Emergency Director until properly relieved by a qualified position; 2) direct medical and fire response efforts; and, 3) coordinate in-plant operations response with the TSC and OSC. After being relieved by another Command and Control position, the Shift Manager will provide assistance and direction to the Control Room staff as necessary.

7.3 The Control Room Coordinator position is intended to provide a prompt transition of Command and Control functions from the Shift Manager within the Control Room complex. This position may assume Command and Control at any emergency classification, and is not dependent on the reporting or activation of any other portion of the ERO.

The Control Room Coordinator duties are to promptly relieve the Shift Manager and perform as Emergency Director until properly relieved by a qualified position. Additional duties of the Control Room Coordinator are to: 1) Ensure a qualified Control Room Operations Liaison established communications with the TSC, OSC and EOF to provide operational information; 2) coordinate in-plant operations response with the TSC and OSC; and, 3) assist the Shift Manager and on-shift operators with plant operations.

7.4 The Site Director position is intended to assume Command and Control functions from the Control Room. This position may assume Command and Control at any emergency classification. The Site Director may assume Command and Control in the Control Room proper at any time. If the Site Director elects to assume Command and Control within the TSC, the TSC must meet activation requirements prior to the transfer of Command and Control duties.

The Site Director duties are to promptly relieve the Control Room Command and Control position and perform as Emergency Director until properly relieved by a qualified position. Additional duties of the Site Director are to: 1) manage the onsite activities of the ERO; and, 2) keep the Emergency Director informed of those onsite activities as necessary.

7.5 The EOF Emergency Director position is intended to assume all Command and Control functions from the plant site. This position may assume Command and Control at any emergency classification, but the EOF must meet activation requirements prior to the transfer of Command and Control duties.

The Emergency Director duties are to promptly relieve the onsite Command and Control position and perform as Emergency Director until properly relieved by a qualified position or termination of the emergency response phase.

8. KEY CONTROL ROOM POSITIONS

8.1 The Control Room Operations Liaison duty is to transmit plant status/Control Room information, etc., to the TSC, OSC and EOF Operations Liaison positions. **[AR 11390]**

8.2 The Control Room Communicator duties are to perform notifications as directed by the Control Room Command and Control position. These notifications include the following: 1) required notifications to the states and counties; 2) required notifications to the NRC; and 3) notifications to the Emergency Response Organization.

9. KEY TECHNICAL SUPPORT CENTER POSITIONS

(Asterisk indicates a Minimum Staffing position)

9.1 The TSC Director duties are to coordinate activities within the TSC. This position is also equally qualified to the Site Director, and may relieve the Site Director when necessary for personal breaks, meals, etc.

9.2 The TSC Security Coordinator duties are to: 1) coordinate the accountability and evacuation of site personnel when necessary; 2) coordinate owner controlled area security operations; and, 3) coordinate access control for the owner controlled area and for onsite Emergency Response Facilities.

9.3 The TSC Administrative Logistics Coordinator duties are to: 1) coordinate administrative personnel support to the onsite ERO; 2) coordinate scheduling and callout of ERO personnel for 24 hour coverage; 3) coordinate personnel access and accountability in the TSC; and, 4) coordinate with the EOF Administrative Logistics Manager and corporate resources for the establishment of emergency logistics onsite, such as food, beverages, medical and administrative supplies, transportation, special equipment, etc.

*9.4 The Reactor Safety Coordinator duties are to: 1) direct the activities of the engineering staff in the TSC; 2) direct the analysis of plant problems and provide recommendations for plant modifications to mitigate the effects of the accident; 3) direct core damage assessment calculations; and, 4) direct the evaluation of possible radiological release paths to the environment.

*9.5 The Protective Measures Coordinator duties are to: 1) Coordinate the dispatch of field teams from the site and perform field team direction until the EOF assumes this duty. 2) monitor and coordinate on site dose assessment operations performed, and keep the Site Director informed of projections and field sample results; 3) evaluate site radiological conditions, and necessary personnel protective measures; 4) evaluate and make recommendations for plant evacuation and evacuation routes; and, 5) prepare and submit state update information, including Protective Action Recommendations, to the Site Director for approval and transmittal to state and federal officials.

*9.6 The TSC Operations Liaison duties are to: 1) obtain plant status/Control Room information from the Control Room Operations Liaison and transmit this information to the TSC staff as needed; and 2) assist the Site Director in formulating appropriate protective action recommendations when necessary. **[AR 11390]**

*9.7 The TSC EP Specialist duties are to perform notifications as directed by the Command and Control position. These notifications include the following: 1) required notifications to the states and counties; 2) required notifications to the NRC; and 3) notifications to the Emergency Response Organization. This position is also responsible to maintain status boards within the TSC, and responsible to assist other positions within the TSC in the performance of their tasks.

10. KEY OSC POSITIONS

(Asterisk indicates a Minimum Staffing position)

*10.1 The OSC Director duties are to: 1) coordinate the development of plans for required maintenance activities; 2) keep the Site Director informed of OSC activities; and, 3) coordinate emergency team response as requested by the TSC/Control Room to perform search and rescue, damage assessment, damage control, repair and modification, and in-plant radiological monitoring.

*10.2 The Radiation Protection Coordinator duties are to: 1) perform as OSC Director until relieved by a qualified position; 2) form and prepare emergency response teams as directed by the OSC Director; 3) coordinate all radiation protection activities onsite; and, 4) keep the OSC Director and TSC Protective Measures Coordinator informed of the status of all radiation protection activities onsite.

*10.3 The Maintenance Coordinator duties are to: 1) perform as OSC Director until relieved by a qualified position; 2) form and prepare emergency response teams as directed by the OSC Director; 3) coordinate all maintenance and damage control activities onsite; and, 4) keep the OSC Director and TSC engineering group informed of the status of maintenance and damage control activities onsite.

*10.4 The Chemistry Coordinator duties are to: 1) perform as OSC Director until relieved by a qualified position; 2) form and prepare emergency response teams as directed by the OSC Director; 3) Supervise, evaluate and coordinate all chemistry activities onsite; and, 4) keep the OSC Director informed of the status of chemistry activities onsite.

10.5 The OSC Operations Liaison duty is to obtain plant status/Control Room information from the Control Room Operations Liaison and transmit this information to the OSC staff as needed. **[AR 11390]**

11. KEY EOF POSITIONS

(Asterisk indicates a Minimum Staffing position)

*11.1 The EOF Protective Measures Manager duties are to: 1) monitor dose assessment operations performed, and keep the Emergency Director informed of projections and field survey results; 2) evaluate site radiological conditions and necessary personnel protective measures; 3) prepare and submit state update information, including Protective Action Recommendations, to the Emergency Director, state and federal officials; and, 4) coordinate technical briefings for the offsite agencies as requested.

*11.2 The EOF Administrative Logistics Manager duties are to: 1) coordinate administrative personnel support to the EOF; 2) coordinate scheduling and callout of ERO personnel for 24 hour coverage; 3) activate the Alert Notification System as requested; and, 4) coordinate OPPD resources for the establishment of emergency logistics for the ERO, such as food, beverages, medical and administrative supplies, transportation, special equipment, etc.

*11.3 The EOF Dose Assessment Coordinator duties are to: 1) direct offsite dose assessments and the associated Protective Action Recommendations (PARs); 2) coordinate OPPD field teams; 3) compare dose projections against field team results; and, 4) compare dose projections and field team results with state and federal agency results.

*11.4 The EOF Information Specialist duties are to: 1) prepare information for use in periodic press releases; and, 2) at an Alert or higher emergency classification, submit all press releases to the Emergency Director (or designee) for approval prior to forwarding the release to the MRC.

*11.5 The EOF Emergency Response Coordinator duties are to perform notifications as directed by the Command and Control position. These notifications include the following: 1) required notifications to the states and counties; 2) required notifications to the NRC; and, 3) notifications to the Emergency Response Organization. This position is also responsible to maintain the classification status board in the EOF, assist other positions within the EOF as needed in the performance of their tasks, and communicate with the OPPD Site Representative located in Des Moines, when necessary.

*11.6 The EOF Operations Liaison duties are to: 1) obtain plant status/Control Room information from the Control Room Operations Liaison and transmit this information to the EOF and NRC staff as needed; and, 2) assist the Emergency Director in review of classifications and formulating appropriate protective action recommendations when necessary. **[AR 11390]**

*11.7 The EOF Dose Assessment Specialist duties are to perform offsite dose assessments and submit the results to the Emergency Director for approval and transmittal to state and federal officials.

12. KEY MEDIA RELEASE CENTER POSITIONS

12.1 The Media Release Center Manager duties are to: 1) coordinate with government authorities to provide periodic briefings and news releases to news media personnel; 2) provide rumor control services; and, 3) keep OPPD personnel, including senior management, informed of the status of the emergency and emergency response effort.

13. EMERGENCY RESPONSE ORGANIZATION INTERFACE WITH ONSITE AND OFFSITE ORGANIZATIONS

Figure B-2 illustrates the interface between the EOF and other onsite support centers. Figure B-3 illustrates the interface of the EOF with federal, state, and local support agencies.

The EOF interfaces with each of the onsite support centers on a continuous basis. Even though the EOF serves as the primary interface with the various offsite support agencies, the TSC interfaces with various contractors and vendors to gather needed design data, consultation, and evaluation concerning the plant's status.

14. EMERGENCY RESPONSE ORGANIZATION NOTIFICATION

Emergency Response Organization notification occurs as shown in Sections E and M of this Plan. The Shift Manager is responsible for initiation of the notification schedule after an emergency condition has been classified.

15. SERVICES PROVIDED BY LOCAL AGENCIES

The Nebraska State Patrol and the Washington County Sheriff Department provide the primary law enforcement support to the Fort Calhoun Station Security Department.

The Blair Volunteer Fire and Rescue Department provides the primary fire and medical rescue and transportation support. The Fort Calhoun Volunteer Fire and Rescue Department provides backup fire and medical rescue and transportation services.

The Blair Hospital provides medical support to routine work related injuries. The Nebraska Health Services University Hospital in Omaha, maintains a regional Radiation Health Center to the specific treatment of radiologically contaminated injuries and radiation exposure diagnoses and treatment.

Transportation of potentially contaminated personnel can be accomplished via OPPD vehicles if not injured. If injured, Blair Volunteer Fire and Rescue, Fort Calhoun Volunteer Fire and Rescue, Missouri Valley Volunteer Fire and Rescue and Council Bluffs Fire Departments receive minimal training on the handling and control of contaminated victims.

The majority of the organizations listed in this section maintain a Letter of Agreement with OPPD. These letters are on file in the Emergency Planning Department at the Fort Calhoun Station site.

Table B-1 - OPPD Emergency Response Organization (ERO) Functions
And Shift Staff Augmentation Plan

NUREG 0654			Omaha Public Power District	
Major Functional Area	Major Tasks	Position Title or Expertise	On Shift Minimum No./Title	Goals for 1 hour Augmentation Minimum No./Title
Plant Operations and Assessment of Operational Aspects		Shift Manager (SRO) Shift Foreman (SRO) Control Room Operators Auxiliary Operators	1 Shift Manager (LSO) 1 Reactor Operator (LSO) 2 Reactor Operator (LO) 2 Equipment Operator	
Emergency Command and Control (Emergency Coordinator)*		Shift Technical Advisor, Shift Manager or designated Facility Manager	1** Shift Manager	1 CR Coordinator 1 Site Director
Notification/ Communication	Notify License, State local and Federal personnel and maintain communication		1*** Equipment Operator	1 ENS Communicator 1 Communicator in TSC 1 Communicator in EOF
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operations Facility (EOF) Director Offsite Dose Assessment	Senior Manager Senior Health Physics (HP) Expertise Offsite Surveys Onsite (Out-of-plant) In-Plant surveys Chemistry/ Radiochemistry	 1 R.P. Technican 1 Chemistry Technican	1 Emergency Director 1 Prot. Meas. Coord 2 R.P. Technician 2 Support Persons 2 R.P. Technician 2 R.P. Technician 1 Chemistry Technician
Plant System Engineering, Repair and Corrective Actions	Techincal Support Repair and Corrective Actions	Shift Technical Advisor Core/Thermal hydraulics Electrical Mechanical Mechanical Maintenance Rad Waste Operator Electrical Maintenance Instrument and Control (I&C) Technician	1 Shift Technical Advisor 1** Equipment Operator 1** Equipment Operator	 1 Reactor Safety Coord 1 Electrical and I&C Engineer 1 Primary Systems Engineer 1 Machinist 1 Equipment Operator or General Maint. Tech. 2 Electrical Mainenance Technician 1 Instrument and Control (I&C) Technician
Corrective Actions (Plant)	Radiation Protection: a. Access Control b. HP Coverage for repair, corrective actions, search and rescue, first aid and firefighting c. Personnel monitoring d. Dosimetry	HP Techincians	2** R.P. Technician	4 R.P. Technician
Firefighting			Fire Brigade per Technical Specifications	Blair Fire Department
Rescue Operations and First Aid			2** Equipment Operator	Blair Rescue Squad
Site Access Control and Personnel Accountability	Security, Firefighting, communications, personnel accountability	Security Personnel	All per Security Plan	

* Emergency Command and Control responsibility is transferred in accordance with Section B of this plan.
** May be provided by Shift personnel assigned other functions.
*** Extra operator serves as the Control Room Communicator.

Figure B-1 - Normal Fort Calhoun Station Management Organization

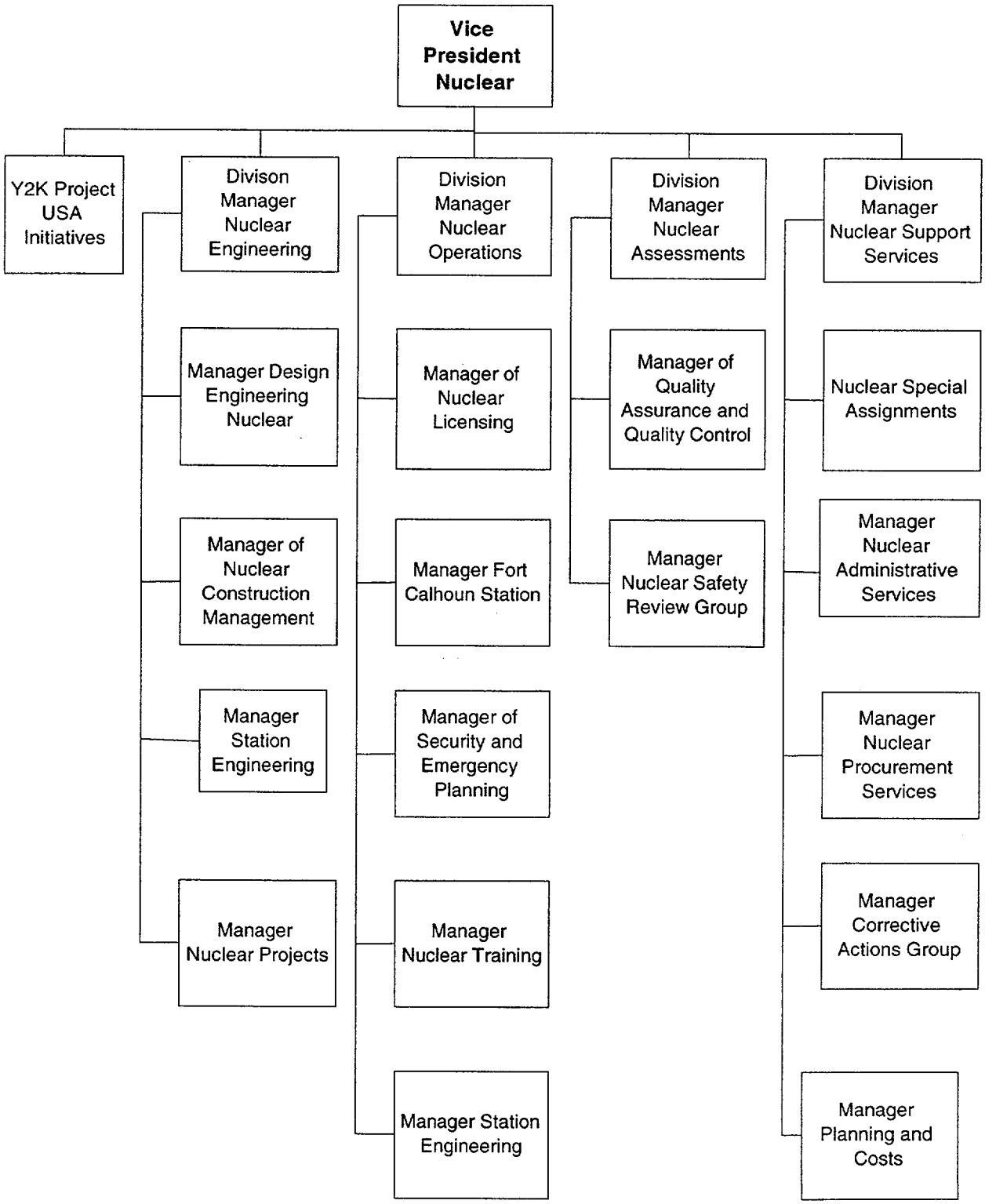


Figure B-2 - Fort Calhoun Station Emergency Response Organization

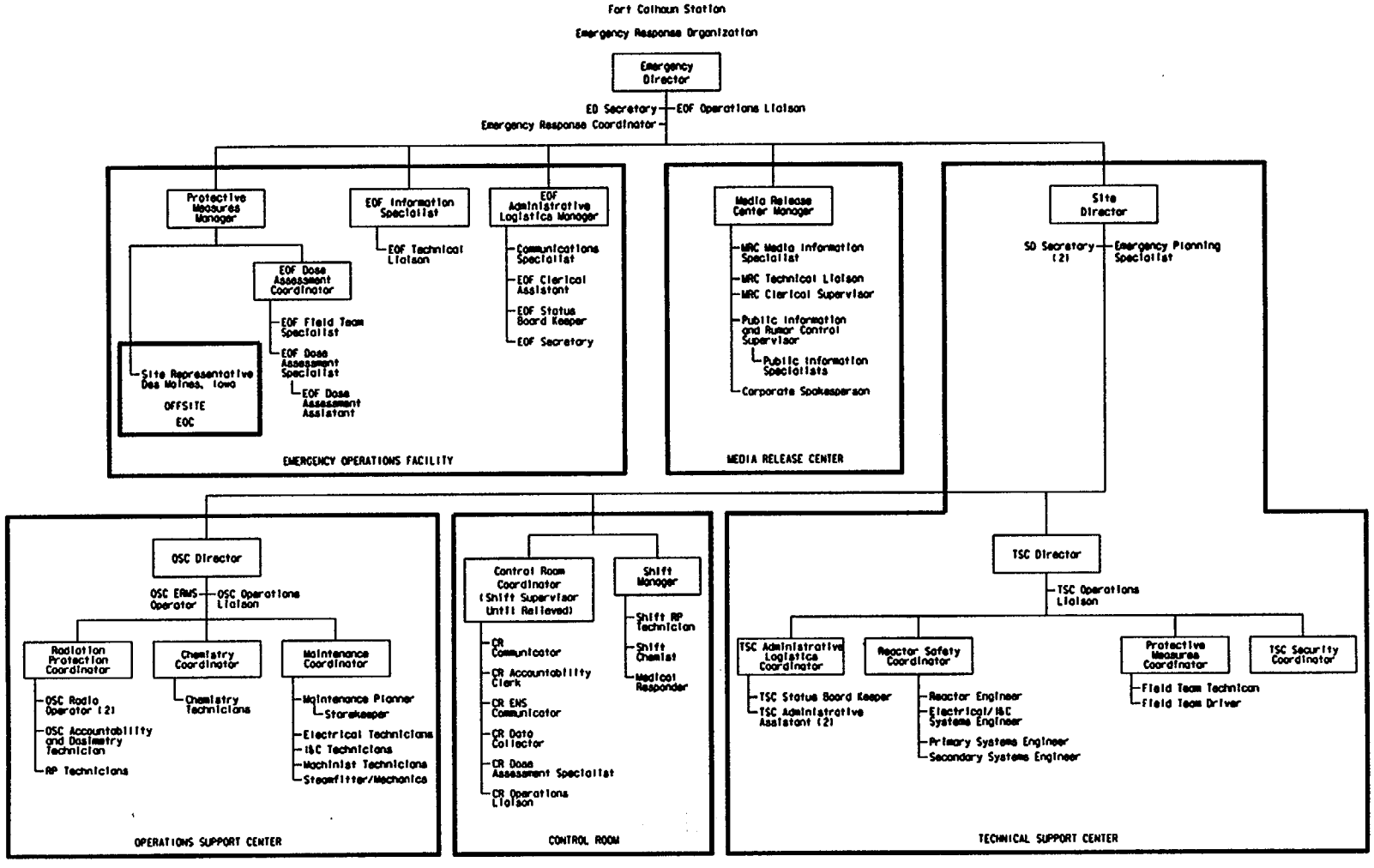
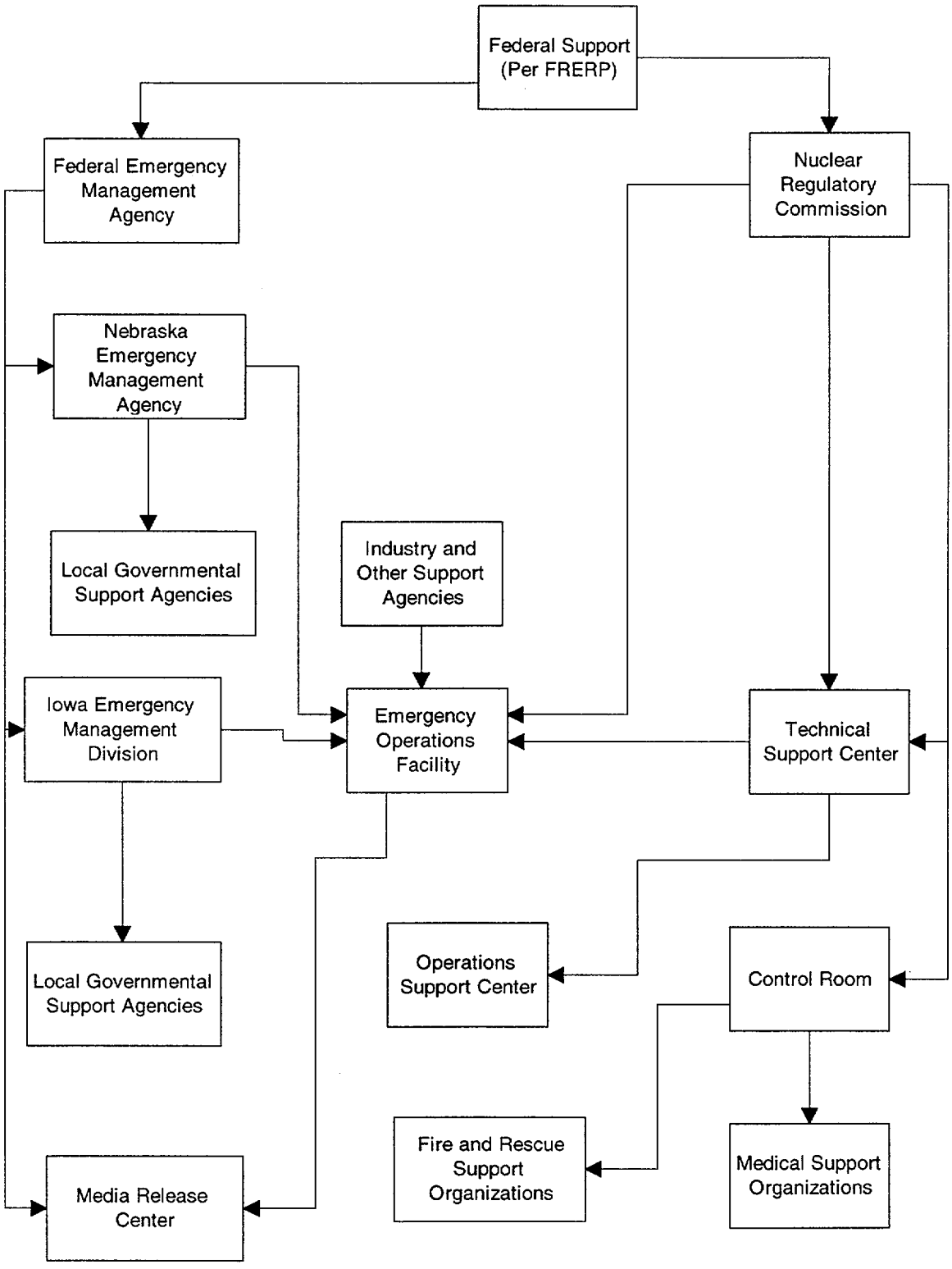


Figure B-3 - Organization Interrelationships"



WP8

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Fort Calhoun Station
Unit No. 1

RERP-SECTION H

RADIOLOGICAL EMERGENCY RESPONSE PLAN

Title: EMERGENCY FACILITIES AND EQUIPMENT

FC-68 Number: 53196

Reason for Change: Change Figures H-2, H-3 and H-4 to reflect removal of the TSC Dose Assessment Coordinator and TSC Chemistry Liaison position from the ERO. Other minor changes to the OSC, TSC and EOC are also included.

Contact Person: M. Reller

EMERGENCY FACILITIES AND EQUIPMENT

NOTE: This section lists the Emergency Response Facilities (ERF) available for activation in the event of an emergency at the Fort Calhoun Nuclear Station. General equipment and staffing of emergency facilities are also included in this section. Communications equipment is covered in Section F. Assessment equipment is covered in Section I.

1. Technical Support Center (TSC)

1.1 Facility Function and Description

The TSC's primary function is the collection, analysis, and distribution of technical data required to support plant operations personnel during an emergency. This operational support is provided from a separate and distinct center, thus reducing personnel congestion in the Control Room. The TSC performs EOF functions and responsibilities until that facility can be fully activated.

The TSC building is located on the north side of the Auxiliary Building. (See Figure H-1). The north wall of the auxiliary building is shared as the south wall of the TSC. To the east of the building is the maintenance shop. To the north and west of the TSC is the Chemistry/Radiation Protection Building. The TSC building was designed to meet the criteria of NUREG 0696 and is less than a two minute walk from the Control Room.

The TSC is composed of a protected area and an equipment area. It is comprised of heavy concrete mat construction with 1-1/2 foot thick reinforced concrete walls and ceiling. This part of the structure is kept at positive pressure and the building air can be filtered through a pre-filter, HEPA filter and charcoal filter. Flood barriers in various locations of the plant protect the TSC from flooding and are designed for a 100 year recurrence frequency.

An "L" shaped equipment area is located to the east and south of the TSC protected area. The equipment area has concrete footings and common steel construction with concrete block walls. Items included in the equipment area are the batteries and UPS power distribution systems, HVAC and HEPA filters.

1.2 Equipment and Supplies

The TSC is typically equipped with the following items:

a) System Drawings

b) Vendor Manuals

1.2 c) An official copy of the Fort Calhoun Station Operating Manual. (This includes the Operating Procedures and Instructions, Emergency Operation Procedures, the Radiological Emergency Response Plan and Emergency Plan Implementing Procedures.

d) Updated Safety Analysis Report (USAR)

e) Technical Specifications

f) Direct and Airborne Radiation Monitoring Equipment which is permanently installed:

A. Area Monitor (RM-093):

The area monitor in the TSC is a GM detector (or equivalent) that detects gamma radiation.

B. Particulate, Iodine and Noble Gas (PING) Monitor:

The sampler and detector subsystem contains a combined particulate, iodine and noble gas sampler in one compact, lead-shielded assembly. Three read-outs contain all alarm functions of alert, high and failure, along with check source actuation controls. The PING is piped directly to the TSC ventilation system to monitor TSC supply air at all times.

g) Emergency Response Facilities Computer System/Safety Parameter Display System (ERFCS/SPDS)

h) Personal Computer(s) with printers and modems.

i) Emergency Response Message System (ERMS).

j) Sign-in Board with identification tags.

k) Emergency logs.

l) Status boards.

m) Electronic Writing Board with output displays in the OSC and EOF.

n) Surrogate tour computer system.

1.3 Staffing

The TSC affords ample space and equipment to support the Emergency Response Organization (ERO) as stated in Section B and additional TSC personnel as defined in the Fort Calhoun ERO Roster. In addition, space has been allocated for NRC representatives.

2. Emergency Operations Facility (EOF)

2.1 Facility Functions and Description

The function of the Emergency Operations Facility is to serve as the support facility for the licensee's overall management of emergency response activities (including coordination with Federal, State and local officials), the central collection and coordination point for all off-site radiological and environmental samples and assessments in order to make public protective action recommendations (PARs).

The Emergency Operations Facility is located 17 miles from the Fort Calhoun Station at the North Omaha Power Station. This site was chosen to ensure continuous habitability and is the only Emergency Operations Facility in the district. The building is capable of providing working space for a minimum of 35 persons consistent with the requirements of NUREG-0696, Revision 1. Space for data systems equipment, communications and storage activities is also available.

2.2 Equipment and Supplies

The EOF is typically equipped with the following emergency response items:

a) Emergency Status Boards

b) 10-Mile EPZ Maps

c) Emergency Monitor Kits

d) Assignment Board with identification tags

e) Portable Calculator(s)

f) Emergency Telephone Books

g) Emergency Logs

h) Personal Computers and Printers

i) Technical Specifications

2.2 j) System Drawings

k) Complete latest revision of the Fort Calhoun Station Operating Manual. (This includes the Operating Procedures and Instructions, Emergency Operating Procedures, the Radiological Emergency Response Plan and Emergency Plan Implementing Procedures).

l) Emergency Response Facilities Computer System/Safety Parameter Display System (ERFCS/SPDS)

m) Surrogate Tour Computer System

n) Emergency Response Message System (ERMS)

2.3 Staffing

The EOF affords ample space and equipment to support the Emergency Response Organization as stated in Section B. In addition, space has been allocated for NRC Representatives.

3. Operations Support Center (OSC)

3.1 Facility Function and Description

The Operations Support Center (OSC) is an onsite area, separate from the Control Room (CR) and the Technical Support Center (TSC) where support personnel assemble and prepare to perform investigative or corrective actions as deemed necessary by the CR or TSC.

The OSC communicates with the CR and the TSC and is located east of the TSC on the second floor of the Maintenance Shop Building.

3.2 Equipment and Supplies

Equipment lockers are provided in the OSC for storage of instruments, SCBAs, supplies and reference documents.

3.3 Staffing

OSC management is comprised of an OSC Director and three Coordinators representing the Radiation Protection, Chemistry and Maintenance disciplines. Technicians comprise the balance of the OSC personnel (See Section B of this plan for a comprehensive organization definition).

4. Control Room

4.1 Facility Description and Function

The Control Room functions as the onsite location from which the nuclear power plant is operated. It is large enough to contain all the instrumentation, controls and displays for the nuclear systems, reactor coolant systems, steam systems, electrical systems, safety and accident monitoring systems. The Control Room plays a vital role in the Emergency Response Organization by providing the initial response actions needed to react to any emergency situation. The Control Room personnel will respond to all emergency situations in an attempt to mitigate the emergency and minimize the impact on the surrounding environment, health and safety of the public as well as plant personnel and equipment.

4.2 Equipment and Supplies

The Fort Calhoun Station Control Room is typically supplied with the following emergency supplies:

a) Emergency Locker (Computer Room)

b) Operating and Emergency Procedures and Manuals

c) Radiological Monitoring Equipment

d) Technical Specifications

e) System Drawings

4.3 Staffing

In addition to normal CR personnel, additional positions are called out in the event of an emergency situation as stated in Section B.

5. Emergency Kits

5.1 The emergency kits and equipment are inventoried in accordance with Fort Calhoun Station's Surveillance Tests and Emergency Planning Tests (EPTs). Extra quantities of equipment, spare parts and supplies are located at the Fort Calhoun Station Warehouse to support extended emergencies.

5.2 Radiological Emergency Kits

These kits include protective equipment, radiological monitoring equipment and emergency supplies. Kits are located in the Control Room, Technical Support Center, Operations Support Center and the Emergency Operations Facility.

The Radiation Protection Department establishes the method and frequency for instrument calibration. Individual instruments are calibrated using approved calibration procedures. Repair/replacement of equipment is coordinated through the Emergency Planning Department.

5.3 Dosimetry Kits

These kits include dosimetry, dosimeter chargers and appropriate paperwork. Kits are located in the Control Room, Technical Support Center, Operations Support Center and Emergency Operations Facility.

5.4 Medical Kits

a) First Aid Equipment and Supply Kits

First aid equipment and supplies are located in the First Aid Room. Trauma and primary response kits are available throughout the plant. These kits are inspected and maintained by the Industrial Safety Coordinator.

b) Contaminated/Injured Person Kit

These kits are located in the Operations Support Center and near the RP Count Room. These kits are maintained by the Emergency Planning Department.

5.5 Decontamination Area

Decontamination equipment and supplies are located in the Main Warehouse and the Radiation Protection work area.

5.6 Field Monitoring Kits

Kits containing protective equipment, radiological monitoring equipment and emergency supplies for Field Monitoring Teams are located in the Offsite Monitor Vehicles or in the Fort Calhoun Station Security Building. Communications equipment is permanently installed in the vehicles.

NOTE: Two designated emergency vehicles remain ready and available onsite at all times, except when driven by authorized personnel as required for emergencies, Emergency Planning Tests, training or maintenance. Use of the emergency vehicles will be authorized by the Manager - Emergency Planning, or designee. In the event one vehicle needs offsite servicing, every effort should be made to have it returned the same day. A sign is posted in each vehicle stating:

"Site Use Only
In an emergency, return to
Fort Calhoun Station"

5.7 Other OPPD Resources

OPPD has other facilities and resources that may be useful in support of an emergency at Fort Calhoun Station. Examples are:

a) Fort Calhoun Station Simulator could be used to model plant transients or serve as an alternate location for support and technical personnel. The simulator has the following communications equipment: Conference Operation Network (COP), Operations Liaison Network, FTS-ENS Phone, Gai-tronics, remote radio base station, regular phone systems, computer terminal for EAGLE, and FAX machine.

b) The FCS Training Center, the FCS Administration Building, and Energy Plaza make available resources such as: briefing rooms, classrooms, technical libraries, a chemistry laboratory, a radiation protection laboratory, communications, computers, food storage and preparation facilities, alternate water supply, and shop areas.

FIGURE H-1 ONSITE EMERGENCY RESPONSE FACILITIES

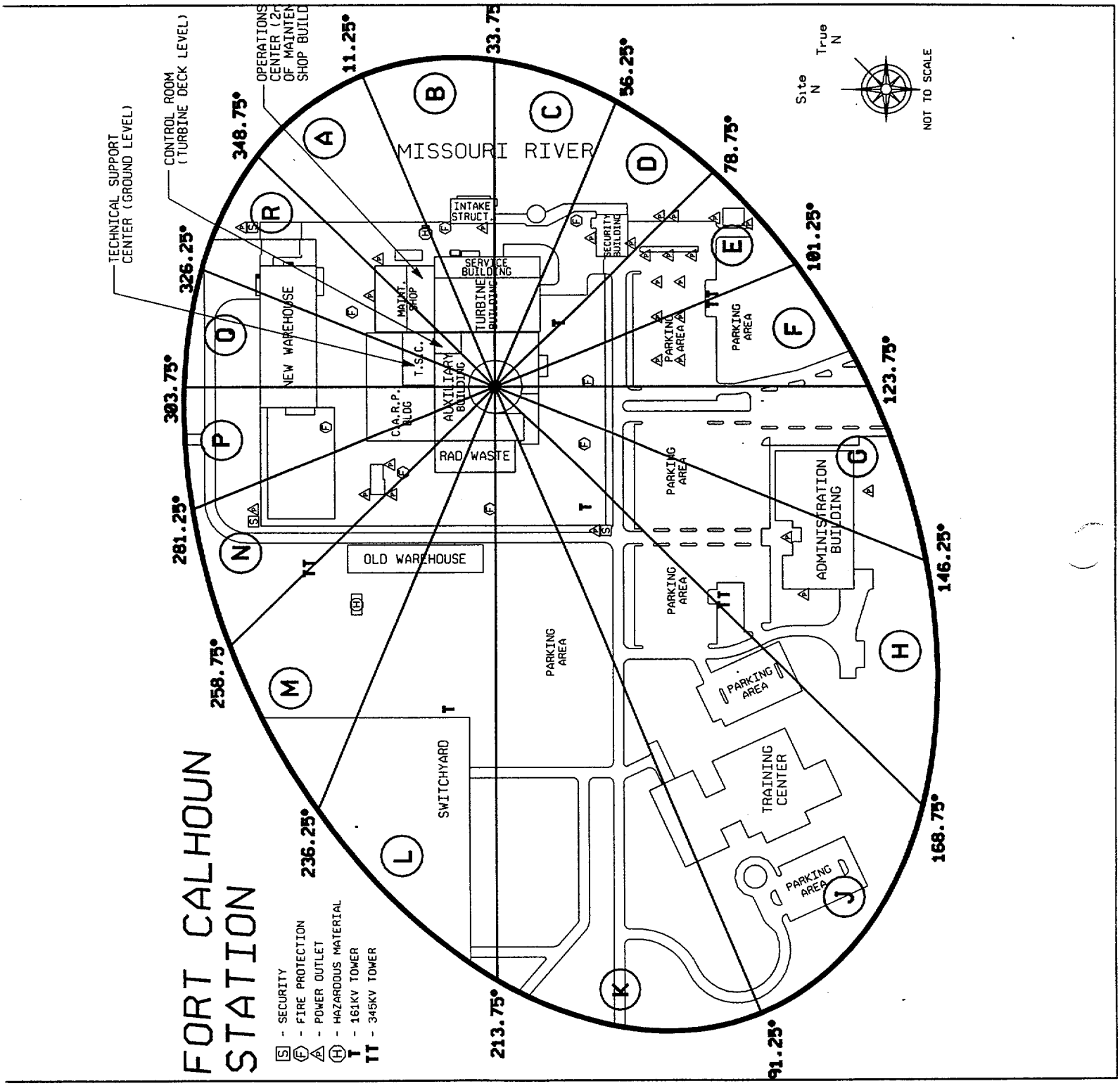
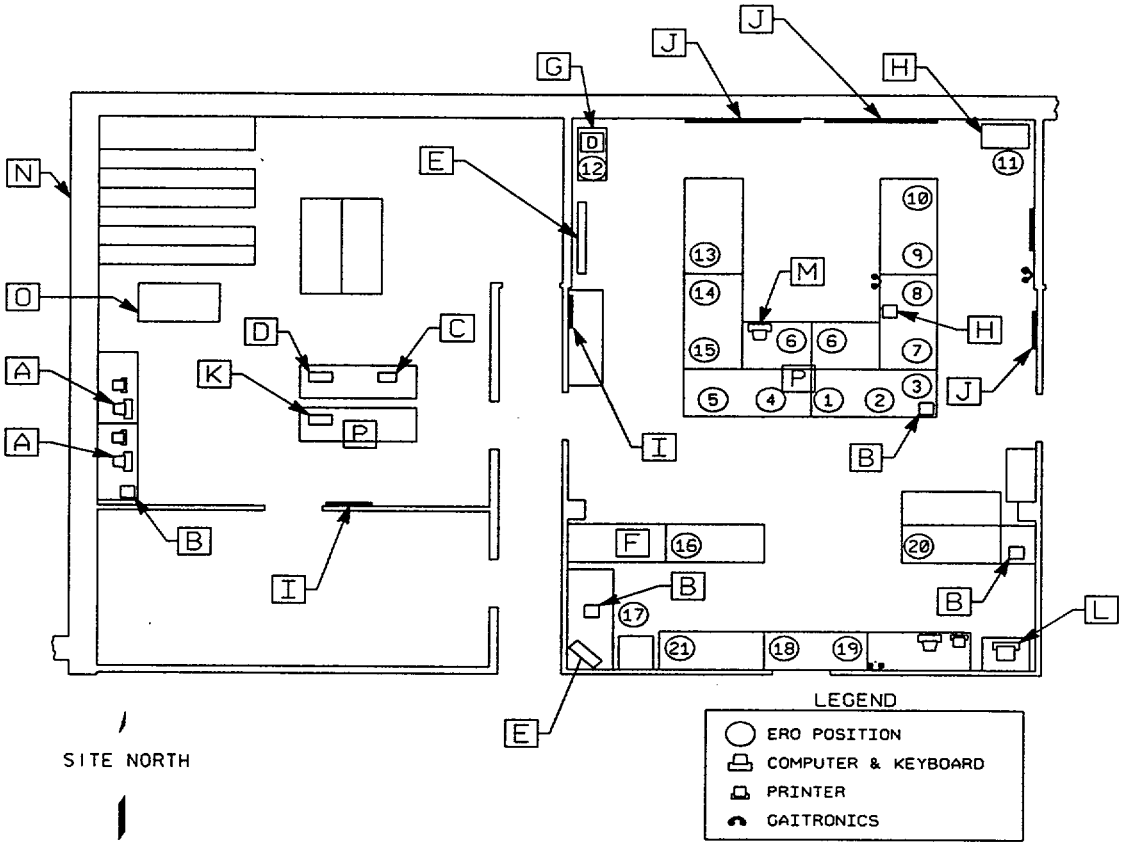


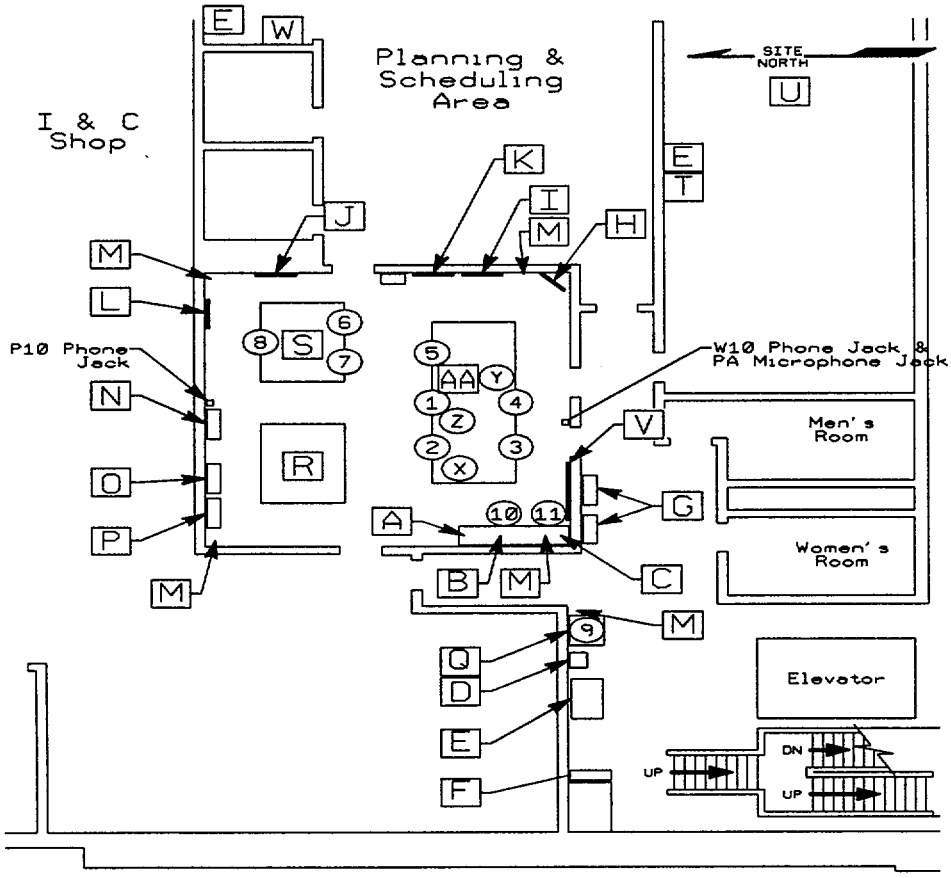
FIGURE H-2 TYPICAL TECHNICAL SUPPORT CENTER LAYOUT



A. EAGLE Terminals
B. ERF Terminals
C. CHP Phone/Recorder
D. FAX Machine
E. Writeboard/Monitors
F. Surrogate Tour System
G. COP Phone
H. ENS Phone
I. EPZ Maps
J. Status Boards
K. Base Radio
L. ERF Printer
M. ERMS
N. Library
O. P.I.D.
P. MOP Phone

1. SITE DIRECTOR
2. TSC DIRECTOR
3. TSC OPS LIAISON
4. NRC RESIDENT INSPECTOR
5. NRC SITE TEAM LEADER
6. SITE DR. SECRETARY
7. RX SAFETY COORD.
8. NRC RX SAFETY COORD.
9. TSC SECURITY COORD.
10. NRC SAFEGUARDS/ SECURITY COORD.
11. TSC STATUS BOARD KEEPER
12. TSC EP SPECIALIST
13. TSC ADMIN LOGISTICS COORD.
14. NRC SITE PROT. MEAS. COORD.
15. PROTECTIVE MEAS. COORD.
16. ELEC/I&C ENG.
17. PRIMARY SYS. ENG.
18. NRC RX SYS. SPEC.
19. NRC CORE DAMAGE ASSESSOR
20. REACTOR ENG.
21. SECONDARY SYS. ENG.

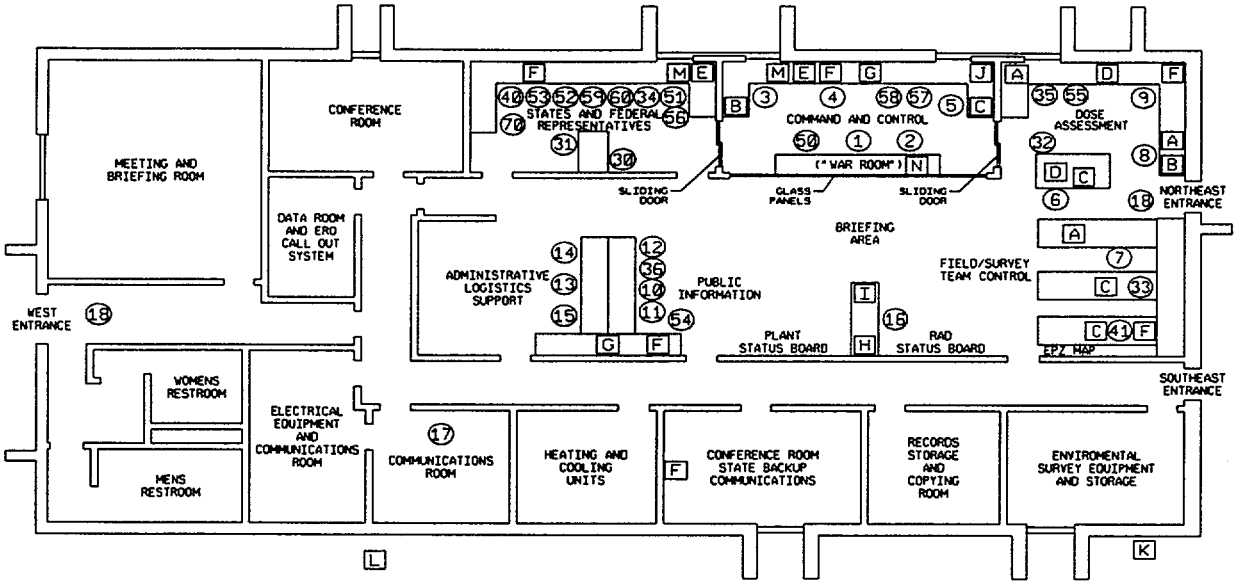
FIGURE H-3 TYPICAL OPERATIONS SUPPORT CENTER LAYOUT



A. ERF Computer
B. ERMS
C. OSC Base Radio
D. Dosimetry Issue Kit
E. Copy Machine
F. Respirators/Air Tanks
G. SCBA's
H. Writeboard Monitor
I. Plant Maps
J. EGG Map
K. Procedure Rack
L. Sign-In Board
M. Gaitronics
N. Radios/Protective Clothing
O. Kits, Phones, Admin. Supplies
P. RP Instruments, Sample Monitoring Kit
Q. HIS-20 System
R. Briefing Area
S. Conference Area
T. Fax Machine
U. Procedures (Official Copy)
V. Team Status Board
W. ERMS Network Printer
X OSC OPS Liaison Network Phone
Y. Conference Health Physics Network Phone
Z. Ringdown Phone to TSC Site Director
AA MOP Phone

1. OSC Director
2. OSC Ops Liaison
3. OSC Chemistry Coord.
4. OSC RP Coord.
5. OSC Maintenance Coord.
6. OSC Maintenance Planner
7. OSC Storekeeper
8. OSC Technicians
9. OSC Acct/Dosimetry Clerk
10. OSC ERMS Operator
11. OSC Radio Operator

FIGURE H-4 TYPICAL EMERGENCY OPERATIONS FACILITY LAYOUT



A. EAGLE Terminals
B. ERF Terminals
C. CHP Phones
D. HPN Phones
E. ENS Phones
F. Fax Machines
G. Writeboards
H. ERF Printer
I. Surrogate Tour
J. Siren Terminal
K. NRC Van Elect/Tele Hookup
L. Nebr. "CRUSH" Elect/Tele Hookup
M. COP Phones
N. Mop Phone

1. EMERGENCY DIRECTOR
2. EMERGENCY DIRECTOR SECRETARY/ERMS
3. EOF OPERATIONS LIAISON
4. EOF EMERGENCY RESPONSE COORDINATOR
5. PROTECTIVE MEASURES MANAGER
6. EOF DOSE ASSESSMENT COORDINATOR
7. EOF FIELD TEAM SPECIALIST
8. EOF DOSE ASSESSMENT SPECIALIST
9. EOF DOSE ASSESSMENT ASSISTANT
10. EOF INFORMATION SPECIALIST
11. EOF TECHNICAL LIAISON
12. DES MOINES SITE REPRESENTATIVE
13. EOF ADMINISTRATIVE LOGISTICS MANAGER
14. EOF SECRETARY
15. EOF CLERICAL ASSISTANT
16. EOF STATUS BOARD KEEPER
17. EOF COMMUNICATIONS SPECIALIST
18. EOF SECURITY PERSONNEL

30. NE. GOVERNOR"S AUTHORIZED REPRESENTATIVE
31. NE. GAR Advisor
32. NE. Manager
33. NE. RAD. TEAM COORDINATOR
34. NE. Recorder
35. NE. Dose Calculations
36. NE. Public Information Officer

40. IA. REPRESENTATIVE
41. IA. RAD. TEAM COORDINATOR

50. NRC SITE TEAM LEADER/DSO/MCL
51. NRC EMERGENCY RESPONSE COORDINATOR
52. NRC STATUS SUMMARY COORDINATOR
53. NRC GOVERNMENTAL LIAISON COORDINATOR
54. NRC PUBLIC INFORMATION REPRESENTATIVE
55. NRC DOSE ASSESSMENT REPRESENTATIVE
56. NRC REACTOR SAFETY COORDINATOR/RSCL
57. NRC PROTECTIVE MEASURES TEAM LEADER
58. NRC PROTECTIVE MEASURES COORDINATOR/PMCL
59. NRC STATUS SUMMARY COMMUNICATOR
60. NRC EMERGENCY RESPONSE ASSISTANT

70. FEMA REPRESENTATIVE