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Fort Calhoun Station Unit No. 1

RERP

RADIOLOGICAL EMERGENCY RESPONSE PLAN

DEFINITIONS AND ABBREVIATIONS

Change No.	EC 37731	
Reason for Change	Implement requirements of 10CFR72 Dry Fuel Storage Program.	
Requestor	M. Weeks	
Preparer	M. Reller	
Editorial Correction (a)	Page 4 (05-16-06)	
Issue Date	03-24-06 3:00 pm	

DEFINITIONS AND ABBREVIATIONS

- 1. ALARA As Low As is Reasonably Achievable Means making every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest
- 2. ANS Alert Notification System Described in Section E
- 3. AR Action Request
- 4. Assessment Actions The appropriate actions taken during or following an accident evaluation before implementing the specific corrective and/or protective actions
- CDE Committed Dose Equivalent (H_{T50}) The dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50 year period following the intake
- 6. CFR Code of Federal Regulations
- 7. CHP Conference Health Physics Network Described in Section E
- Committed Effective Dose Equivalent (H_{E50}) Sum of the products of the weighing factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to these organs or tissues
- 9. Control Room Functions described in Section H
- 10. COP Conference Operations (Phone) Network- Described in Section E
- 11. Corrective Actions Measures taken to correct or mitigate an emergency condition at its origin in order to prevent an uncontrolled release of radioactive material or reduce the magnitude of the release.
- 12. CR Control Room Functions described in Section H (2008) (1998) (1998)
- Deep Dose Equivalent (DDE or H_d) applies to external whole-body exposure, is the dose equivalent at a tissue depth of 1 cm (1000 mg/cm²)
- 14. ΔT Delta Temperature The difference in temperature between points 10 meters and 60 meters above the ground in units of centigrade. The value displayed on the ERFCS equates to; 100m $\Delta T = [(T @ 60m T @ 10m) \times 2)]$
- 15. DOE Department Of Energy Role is discussed in Section C

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16.	Drill - Described in Section N
17.	
18.	
19.	EAD Electronic Alarming Dosimeter
20.	EAGLE - Emergency Assessment of Gaseous And Liquid Effluent - Described in Section E
21.	EAL - Emergency Action Level - Described in Section D
22.	EAS - (Emergency Alerting System) - Described in Section E
23.	ECCS - Emergency Core Cooling System
24.	ENS - (FTS-ENS) Federal Telephone System Emergency Notification System - Described in Section F
25.	EOC - Emergency Operations Center - Discussed in Sections C and F
26.	EOF - Emergency Operations Facility - Functions described in Section H
27.	EPA - Environmental Protection Agency - Role Discussed in Section C
28.	EPIP - Emergency Plan Implementing Procedures
29.	EPT - Emergency Plan Test - Described in Section P
30.	EPZ - Emergency Planning Zone - Described in Section J
31.	ERDS - Emergency Response Data System - Described in Section F
32.	ERFCS - Emergency Response Facilities Computer System - Described in Section F
33.	ERMS - Emergency Response Message System -Described in Section F
34.	ERO - Emergency Response Organization - Duties Described in Section B
35.	Exercise - Described in Section N
36.	FAA - Federal Aviation Administration - Role discussed in Section C
37.	FEMA - Federal Emergency Management Agency - Role described in Section C

- 38. FTS Federal Telecommunications Systems (NRC Phone Circuits) Discussed in Section F
- 39. GAR Governor's Authorized Representative Authorized by letters in Appendix A
- 40. HPN Health Physics Network Described in Section F
- 41. HSM Horizontal Storage Module
- 42. ISFSI Independent Spent Fuel Storage Installation
- 43. IPZ Ingestion Pathway Zone Discussed in Section J
- 44. JIC Joint Information Center Functions discussed in Section B
- 45. NAWAS National Warning System Functions described in Section F
- 46. NHS Nebraska Health System University Hospital Role discussed in Section L
- 47. NRC Nuclear Regulatory Commission Role discussed in Section C
- 48. NWS National Weather Service Role discussed in Section C
- 49. Operation Liaison Network- Described in Section F
- 50. OSC Operation Support Center Functions described in Section H
- 51. PABX Private Automatic Branch Exchanges Function described in Section H
- 52. PAG Protective Action Guideline Discussed in Section J
- 53. PAR Protective Action Recommendation Discussed in Section J
- 54. Protective Actions Discussed in Section J
- 55. REM The special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rems is equal to the absorbed dose in rads multiplied by the quality factor (1 rem = .01 sievert).
- SDE Shallow Dose Equivalent Is the dose equivalent at a tissue depth of 0.007 cm or 7 mg/cm² averaged over an area of 10 cm². It applies to the external exposure of the skin or an extremity.
- 57. TEDE Total Effective Dose Equivalent The sum of the deep-dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures). This represents the combined dose (DDE+CEDE) to a worker.

- 58. TLD Thermoluminescent Dosimeter A device worn by plant personnel to measure the amount of radiation received.
- 59. TSC Technical Support Center Functions described in Section H
- 60. USAR Updated Safety Analysis Report

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AREA DESCRIPTION

1. PLANT LOCATION

Fort Calhoun Station is located midway between Fort Calhoun and Blair, Nebraska, on the west bank of the Missouri River. The site consists of approximately 660.46 acres with an additional exclusion area of 582.18 acres on the northeast bank of the river directly opposite the plant buildings. The Fort Calhoun Station includes the Independent Spent Fuel Storage Installation (ISFSI), located within the protected area, centered approximately 200 meters north-northwest of the Containment Building. The distance from the reactor containment to the nearest site boundary is approximately 910 meters; and the distance to the nearest residence is beyond the site boundary. Except for the city of Blair and the villages of Fort Calhoun and Kennard, the area within a ten mile radius is predominantly rural. The land use within the ten mile radius is primarily devoted to general farming. There are no private businesses or public recreational facilities on the plant property. The DeSoto National Wildlife Refuge occupies approximately 7821 acres east of the plant site. This area is open to the public for day use year-round. Visitors to the refuge generally use areas from two to five miles from the plant. Estimates by the U.S. Fish and Wildlife Service place annual usage of the facility at approximately 120,000 for the Visitors Center and 400,000 for the refuge. The expected maximum daily usage of the facility has been placed at 2500 visitors for a winter weekday and 5000 on a summer weekend. The Boyer Chute Federal Recreation Area is a day use facility occupying approximately 2000 acres southeast of the plant site. Visitors to the recreation area generally use areas seven to ten miles from the plant. The estimates for annual usage of this facility is approximately 50,000 visitors.

The State of Nebraska operates the Fort Atkinson State Historic Park five and half miles southeast of the plant site. This day use facility is mostly seasonal and estimates place annual usage at 60,000. The State of Iowa maintains Wilson Island State Park with 275 camping spaces south of the DeSoto National Wildlife Refuge and four miles southeast of the plant site. The estimates for usage of this facility range from 500 on a winter weekday to 1000 on a summer weekend.

Two private facilities lie to the north of the plant along the Missouri River. The Cottonwood Marina is located approximately four and a half miles from the plant. Estimates place summer weekend usage at 200 people. Riverland Resort Park is a private campground lying directly south of Cottonwood Marina and ranging from four to four and a half miles from the plant. The campground has approximately 235 campsites and is open from April to October.

2. AREA INDUSTRIES

A listing of various industries located within a ten mile radius of the Fort Calhoun Station, including firm name, product, number of employees, and location from the plant site is contained in the Updated Safety Analysis Report.

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AREA DESCRIPTION

3. AREA WATER SUPPLIES

Local public drinking water supplies are not taken from the Missouri River in this area. The first downstream intake is the city of Omaha approximately 19.5 miles downstream. Industrial water use is limited to cooling purposes in the Omaha area. Drinking water near the Fort Calhoun Station is obtained from either well or reservoirs. Since the known public and private water supplies originate at elevations higher than the river, radioactive liquids that might be discharged from the plant into the river should not contaminate these supplies.

There are also many private wells in the region which draw primarily upon ground water rather than on springs or other surface sources. Several marinas are located along the Missouri River, between 3 miles upstream from Blair and Omaha, 18 miles downstream. In the event of a significant waterborne release incident from the Fort Calhoun Station, the Nebraska Department of Environmental Control acting in conjunction with the Nebraska Department of Health, Division of Radiological Health and the U. S. Coast Guard are prepared to notify all downstream users of Missouri River water. Notification is made through OPPD management directly to the Metropolitan Utilities District (MUD) in the event of an inadvertent liquid release to the river. Swimming, boating and other recreational activities involving river water can be controlled by the Coast Guard until adequate surveys have been taken to determine when normal activities may be resumed.

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PURPOSE OF THE EMERGENCY PLAN

The purpose of the Fort Calhoun Station "Radiological Emergency Response Plan" (RERP) is to delineate an organization for coping with emergencies, to classify emergencies according to severity, define and assign responsibilities and authorities, and to clearly outline the most effective course of action and protective measures required to mitigate the consequences of an accident and to safeguard the public and station personnel in the event of an incident. The Emergency Plan Implementing Procedures (EPIP's), Radiation Protection procedures, Emergency Operating procedures and other station references are available at the plant to further assist personnel for operating during abnormal occurrences. The various emergency procedures are put into effect whenever a system, component or circuit failure could lead to a personnel hazard or major equipment failure. Emergency Operating Procedures are sufficiently detailed so that the plant is placed, as expeditiously as possible, in a safe condition. The various procedures include such items as radiation hazards, weather conditions and availability of technical and operating personnel.

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ACCIDENT CONSIDERATIONS

1. <u>FUEL HANDLING ACCIDENT</u>

The possibility of an incident during fuel handling is unlikely due to the many physical limitations imposed on fuel handling operations and systems. In addition, administrative restrictions placed on fuel handling procedures provide greater control. Nevertheless, the offsite consequences of dropping a spent fuel assembly and damaging the entire assembly have been evaluated and are documented in the Fort Calhoun Station, Unit No. 1 USAR, Section 14.18. Emergency onsite and offsite monitoring practices would begin immediately following the accident to determine actual consequences, and appropriate emergency actions would be taken. Emergency procedures addressing a Fuel Handling Incident provide emergency actions for this mishap.

The transfer cask that is used to transfer spent fuel (32 assembly capacity) contained within a dry shielded canister (DSC) from the Auxiliary Building to the ISFSI, has been analyzed for an 80 inch drop accident in the NUHOMS FSAR. The analysis determined that the DSC would retain its leak tight integrity for this 80 inch drop. This bounds the height of the transfer cask while it is being moved by the heavy-haul trailer between the Auxiliary Building and the ISFSI so that a release of radioactivity due to a drop event during transfer operations would not occur.

2. FIRES

2.1 Internal Plant Fires (within the Protected Area)

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Internal Plant fires are normally handled by the station's Fire Brigade, comprised of trained individuals from the Operations, Radiation Protection and Security Departments. All efforts are made to prevent the spread of airborne contamination should the fires occur within the Radiological Controlled Area.

2.2 External Fires (outside the Protected Area)

External fires are controlled by local fire department response. In the event high airborne contamination constitutes a possible hazard to areas outside of the protected area, offsite survey teams/personnel can be dispatched immediately.

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ACCIDENT CONSIDERATIONS

3. EXPLOSION

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Because of the accumulation of waste gases in the waste gas decay tanks, the possibility and consequences of an explosion have been considered. An explosion could result in an unexpected, uncontrolled release to the atmosphere of radioactive fission gases that were stored in the waste gas system. A failure of any of the waste gas decay tanks or associated piping could also result in a release of gaseous activity. The noble gases stored in the tanks would diffuse and become diluted during their transport to the site boundary. The projected Deep Dose Equivalent (DDE) at the exclusion area boundary would be less than 1.0 Rem. This conservative analysis is based upon 1% fuel cladding defects, and accumulation of all noble gases without release over a full core cycle. Emergency procedures addressing a Waste Gas Incident, would be placed into effect immediately and offsite monitoring teams would be dispatched downwind.

The ISFSI horizontal storage modules (HSM) are designed to protect the DSC's from the effects of explosions to ensure the DSC's retain their leak-tight integrity and prevent a release of radioactivity to the atmosphere. An analysis of the haul route used to transfer the DSC's from the Auxiliary Building to the ISFSI was performed, and it identified administrative controls needed to prevent explosions in the vicinity of the transfer cask (designed to withstand 3 psi overpressure) during spent fuel transfer operations.

TOXIC CHEMICAL RELEASE ACCIDENTS

The primary toxic chemical release accidents which may result in toxic gas concentrations at Fort Calhoun Station are shown below:

TOXIC CHEMICAL ACCIDENT

Ammonia (NH ₃)	Rupture of two 25,000 ton offsite refrigerated tanks.
Ammonia	Rupture of two 30,000 gal. offsite non-refrigerated tanks.
Ammonia	Rupture of a 78 ton railroad tank car.
Ammonia	Rupture of a 2 ton tank truck.

The above accidents will not pose a hazard to control room personnel, due to toxic gas monitors located at the fresh air intake of the control room, which isolates the control room before the gases reach the toxic limit. The stringent odor of ammonia makes station personnel immediately aware of any leakage or toxic gas cloud. Spent Fuel storage at the ISFSI relies on passive means of decay heat removal (natural convection), so a toxic gas release does not challenge nuclear safety.

The toxic gas monitors sample for NH₃ and continuously monitor the fresh air to the control room during normal plant operations.

At different phases of plant operation, Hydrogen and/or Nitrogen gases blanket the volume control tank and the waste gas system. Considering that the deleterious effect of these gases is the exclusion of oxygen, a release to the atmosphere diminishes the harmful effect and a serious hazard is eliminated.

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ACCIDENT CONSIDERATIONS

(Continued)

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In the event of an offsite accidental release of chemicals, within a five (5) mile radius of the Fort Calhoun Station, the Blair Fire Department emergency procedures require notification to the Fort Calhoun Station. The counties of Washington (Nebraska) and Harrison (Iowa) have agreed to notify the Fort Calhoun Station when hazardous chemical accidents occur within five miles of the station. The Blair Industrial Park Co-Op, emergency notification system is an organization of industries, including Fort Calhoun Station that have banded together to form a warning system to notify the member industries and the Washington County Dispatch center of a potential or actual event occurring at a member facility. Appropriate action is taken, especially in the control.room, to ensure that air remains breathable. For long duration toxic accidents, six (6) hours of compressed air is available for five (5) control room operators coupled with provisions to obtain additional air within this time period.

5. MAJOR STEAM RELEASE

The offsite consequences of a steam line rupture incident has been evaluated and is documented in the Fort Calhoun Station, Unit NO. 1 USAR. The maximum size steam line rupture is a circumferential double-ended rupture of the 36-inch main steam header. The analysis of this incident at the site boundary is calculated to be 0.9 Rem TEDE. Plant personnel would be protected by normal health physics practices and procedures. Operator action follows the emergency procedures addressing a Steam Line Rupture with Loss of Offsite Power.

6. PERSONNEL INJURY

A fully stocked First Aid Room is available in the Plant. Immediate and temporary care may be given to the injured person using standard First Aid practices. If the injury involves contamination, efforts to decontaminate the injured person to reasonable levels are made prior to transfer to the First Aid Room or to offsite medical facilities. If decontamination is not practical, the injured person is covered in such a manner as to minimize the spread of contamination until either medical aid can be obtained or until the injured person can be transported to the NHS University Hospital Radiation Health Center.

7. NATURAL DISASTERS

1.1.2

A natural disaster may occur which could initiate any of the accidents previously discussed. The reactor may be placed in a shutdown condition, depending upon the anticipated or experienced severity of the disaster. The ISFSI is designed to withstand natural phenomena, including the maximum hypothetical earthquake, design basis tornado and tornado-driven missiles, with no release of radioactivity.

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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 telephone numbers, and any information, which could impede emergency response.

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RERP-SECTION B

ORGANIZATIONAL CONTROL OF EMERGENCIES

Change No.	EC 33003
Reason for Change	Rename position of Field Team Driver into that of Field Team Technician, so they can do both jobs. Divide the OSC Accountability/Dosimetry Technician into two positions. Converted from WordPerfect to Word and updated format.
Requestor	M. Reller
Preparer	M. Reller
Editorial Correction (a)	Pages 2, 3, 10, 11, 15 and 16 (05-16-06)
Issue Date	12-08-04 3:00 pm

1. ONGOING COMMITMENT DOCUMENTS

AR 11390, 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 Control Room Supervisor (Senior Reactor Operator); two Reactor Operators; two Equipment Operators; a Control Room Communicator; 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

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 JIC).

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3.2 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.

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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, EOF and TSC be activated within one hour following an Alert classification. The JIC 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) an OSC Director, 2) a Radiation Protection Technician or Radiation Protection Coordinator; 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 COP Communicator; 3) a TSC Protective Measures Coordinator; and, 4) a Reactor Safety Coordinator.
- 4.5 Minimum staffing for activation of the EOF is as follows: 1) an Emergency Director; 2) an EOF COP Communicator; 3) an EOF Protective Measures Manager or EOF Dose Assessment Coordinator and 4) an EOF Dose Assessment Specialist.
- 4.6 OPPD Emergency Response Facilities are considered augmented when all minimum and augmenting staffing positions are filled.
- 4.7 Selected support staff, which assists the minimum and augmenting staff, is shown on Figure B-2. The support staff is intended to supplement and enhance operation of their respective facilities. Additional personnel may respond.
- 4.8 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.
- 4.9 Some ERO personnel may elect to maintain an assistant position. This is acceptable 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 an immediate and decisive response to mitigate the consequences of any nuclear emergency and for the 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 the RERP.

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The ERO is intended to provide a pre-qualified organization capable of fulfilling the 5.2 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.

COMMAND AND CONTROL RESPONSIBILITIES 6.

- The position performing the duties of the Emergency Director is referred to as the 6.1 "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. -davia

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.

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

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- 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 Reactor 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 ERO 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 establishes 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.

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7.4 The Site Director position is intended to assume Command and Control functions from the Control Room if the EOF is not available or cannot assume Command and Control. 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.

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, if the EOF is not available or cannot assume Command and Control. 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. CONTROL ROOM POSITIONS

The following positions are on-shift staff, and augmenting positions for the Control Room. Additional Control Room support staffing is identified on Figure B-2.

8.1 Control Room on-shift staff positions are:

8.1.1 Shift Managers duties are described in Sections 3, 6 and 7.2.

- 8.1.2 Control Room Supervisor duties include assessment of plant conditions, ensuring requirements of the AOPs and EOPs are met and supervision of on-shift operations staff.
 - 8.1.3 Reactor Operators (2) duties include implementation of the AOPs and EOPs under the direction of the Control Room Supervisor.
 - 8.1.4 Control Room Communicator duties include 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.
 - 8.1.5 Equipment Operators (2) duties include making repairs and corrective actions on plant equipment until augmented plant maintenance staff arrives.

· ·	8.1.6	Shift Technical Advisor duties include providing technical support for plant systems, engineering, and providing input on repair and corrective actions.
. ۲۰۰۰ ۲۰۰۰ و	8.1.7	Shift Chemistry Technician duties include chemistry and radiochemistry analysis, radiological accident assessment and support and offsite dose assessment.
til Malakt	8.1.8	Shift Radiation Protection Technician duties include conducting radiological accident assessment and support, offsite dose assessment and onsite in-plant surveys.
8.2	Contro	ol Room (CR) augmenting positions are:
1 ³	8.2.1	Coordinator duties are described in Section 6 and 7.3.
	8.2.2	Operations Liaison duties include transmitting plant status/Control Room information, etc. to the TSC, EOF and OSC Operations Liaison positions.
	8.2.3	ENS Communicator duties include maintaining an ENS link with the NRC.
	8.2.4	Equipment Operator duties include providing operations support to repair teams.
9. <u>T</u>	ECHNI	CAL SUPPORT CENTER POSITIONS
		g are minimum staffing and augmenting positions for the Technical Support Center tional TSC support staffing is identified on Figure B-2.

- 9.1 Minimum staffing positions for the TSC are:
 - 9.1.1 Site Director duties are described in Steps 6 and 7.4.
 - 9.1.2 Reactor Safety Coordinator duties include: 1) directing the activities of the engineering staff in the TSC; 2) directing the analysis of plant problems and providing recommendations for plant modifications to mitigate the effects of the accident; 3) directing core damage assessment calculations; and, 4) directing the evaluation of possible radiological release paths to the environment.
 - 9.1.3 Protective Measures Coordinator duties include: 1) coordinating the dispatch of field teams from the site and performing field team direction until the EOF assumes this duty; 2) monitoring and coordinating on site dose assessment operations performed, and keep the Site Director informed of dose projections and field sample results; 3) evaluating site radiological conditions, and necessary personnel protective measures; 4) evaluating and making recommendations for plant evacuation and evacuation routes; and, 5) preparing and submitting state update information, including Protective Action Recommendations, to the Site Director for approval and transmittal to state and federal officials if TSC has Command and Control.

- 9.1.4 COP Communicator duties include performing notifications as directed by the Command and Control position. These notifications include the following:
 1) required notifications to states and counties; 2) required notifications to the NRC; and, 3) notifications to the Emergency Response Organization. This position also assists in maintaining status boards within the TSC.
- 9.2 Augmenting positions for the TSC are:
 - 9.2.1 Field Teams duties include providing off-site radiological surveys in the areas potentially affected by a radiological release.
 - 9.2.2 I&C Electrical Systems Engineer duties include providing engineering analysis and troubleshooting in that field of expertise.
 - 9.2.3 Operations Liaison duties include: 1) obtaining plant status/Control Room information from the Control Room Operations Liaison and transmitting this information to the TSC staff as needed; and 2) assisting the Site Director in formulating appropriate protective action recommendations when necessary. [AR 11390]

9.2.4 Primary Systems Engineer duties include providing engineering analysis and troubleshooting in that field of expertise.

10. OPERATIONS SUPPORT CENTER POSITIONS

The following are minimum staffing and augmenting positions for the Operations Support Center (OSC). Additional OSC support staffing is identified on Figure B-2.

- 10.1 Minimum staffing positions for the OSC are:
 - 10.1.1 OSC Director duties include: 1) coordinating the development of plans for required maintenance activities; 2) keeping the Site Director informed of OSC activities; and, 3) coordinating 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.
 - 10.1.2 Radiation Protection Technician duties include coordination of on-site radiation protection activities.

10.1.3 One other person to form a team.

10.2 Augmenting positions for the OSC are:

10.2.1 Chemistry Technician duties include evaluating and performing all chemistry activities on-site. Act as Chemistry Coordinator until relieved.

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- 10.2.2 Dosimetry Technician duties include issuing Dosimetry and performing dose extensions as needed.
- 10.2.3 Electrical Maintenance Technicians (2 positions) duties include providing repairs and corrective actions for plant electrical equipment as directed.
- 10.2.4 I&C Technician duties include providing repairs and corrective actions to plant instruments as directed.
- 10.2.5 Machinist or Steam Fitter Mechanic duties include providing repairs and corrective actions to plant mechanical equipment as directed.
- 10.2.6 Operations Liaison duties include obtaining plant status/Control Room information from the Control Room Operations Liaison and transmitting this information to the OSC staff as needed. [AR 11390]
- 10.2.7 Radiation Protection Technicians (5 positions) duties include providing radiological surveys and job coverage to repair and corrective action teams as directed.
- 10.2.8 The Radiation Protection Coordinator duties include: 1) forming and preparing emergency response teams as directed by the OSC Director; 2) coordinating all radiation protection activities onsite; 3) keeping the OSC Director and TSC Protective Measures Coordinator informed of the status of all radiation protection activities onsite; and, 4) fulfilling the minimum staffing position of Radiation Protection Technician, if required.

11. EMERGENCY OPERATIONS FACILITY POSITIONS

The following positions are minimum staffing and augmented positions for the Emergency Operations Facility (EOF). Additional EOF support staffing is identified on Figure B-2.

- 11.1 Minimum staffing positions for the EOF are:
 - 11.1.1 Emergency Director duties are described in Section 6 and 7.5.
 - 11.1.2 COP Communicator duties include performing notifications as directed by the Command and Control position. These notifications include the following:

 required notifications to states and counties; 2) required notifications to the NRC; and, 3) notifications to the Emergency Response Organization. This position also assists in maintaining status boards within the EOF.

NOTE: Only one of the positions described in Step 11.1.3 or Step 11.1.4 is required for minimum staffing.

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- 11.1.3 Protective Measures Manager duties include: 1) monitoring dose assessment operations performed, and keeping the Emergency Director informed of projections and field survey results; 2) evaluating site radiological conditions and necessary personnel protective measures; 3) preparing and submitting state update information, including Protective Action Recommendations, to the Emergency Director, state and federal officials; and, 4) coordinating technical briefings for the offsite agencies as requested.
- 11.1.4 Dose Assessment Coordinator duties include: 1) directing offsite dose assessments and the associated Protective Action Recommendations (PARs);
 2) coordinating OPPD field teams; 3) comparing dose projections against field team results; and, 4) comparing dose projections and field team results with state and federal agency results.
 - 11.1.5 Dose Assessment Specialist duties include performing offsite dose assessments and submitting the results to the Emergency Director for approval and transmittal to state and federal officials.
- 11.2 Augmenting positions for the EOF are:

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- 11.2.1 Administrative Logistics Manager duties include: 1) coordinating administrative personnel support to the EOF; 2) coordinating scheduling and callout of ERO personnel for 24 hour coverage; 3) activating the Alert Notification System as requested; and, 4) coordinating OPPD resources for the establishment of emergency logistics for the ERO, such as food, beverages, medical and administrative supplies, transportation, special equipment, etc.
- 11.2.2 Field Team Specialist duties include coordinating the activities of the OPPD and state Field Teams to achieve the most efficient use of teams for plume tracking.
- 11.2.3 Information Specialist duties include: 1) preparing information for use in periodic press releases; and, 2) at an Alert or higher emergency classification, submitting all press releases to the Emergency Director (or designee) for approval prior to forwarding the release to the JIC.
- 11.2.4 Operations Liaison duties include: 1) obtaining plant status/Control Room information from the Control Room Operations Liaison and transmitting this information to the EOF and NRC staff as needed; and, 2) assisting the Emergency Director in the review of classifications and formulating appropriate protective action recommendations when necessary. [AR 11390]

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12. JOINT INFORMATION CENTER POSITIONS

The Joint Information Center Manager duties include: 1) coordinating with government authorities and to provide periodic briefings and news releases to news media personnel; 2) providing public inquiry services; and, 3) keeping OPPD personnel, including senior management, informed of the status of the emergency and emergency response effort. OPPD's Corporate Crisis Communication Plan lists other JIC positions.

13. EMERGENCY RESPONSE ORGANIZATION INTERFACE WITH ONSITE AND OFFSITE ORGANIZATIONS

- 13.1 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.
- 13.2 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 the RERP. The Shift Manager is responsible for initiation of the notification process after an emergency condition has been classified.

15. SERVICES PROVIDED BY LOCAL AGENCIES

- 15.1 The Nebraska State Patrol and the Washington County Sheriff's Department have agreed to provide the primary law enforcement support to the Fort Calhoun Station Security Department.
- 15.2 The Blair Volunteer Fire Department has agreed to provide the primary fire support services for the Fort Calhoun Station. The Fort Calhoun Volunteer Fire Department has agreed to provide backup fire response.
- 15.3 OPPD vehicles may transport non-injured potentially contaminated personnel. The Blair Volunteer Fire Department has agreed to provide primary rescue and transportation support, for injured and/or contaminated personnel. The Fort Calhoun Volunteer Fire and Rescue, Missouri Valley Fire and Rescue and the Council Bluffs Ambulance and Fire Departments have agreed to provide backup services.

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15.4 The Blair Hospital has agreed to provide medical support for work related injuries. Nebraska Health Services University Hospital in Omaha, maintains a regional Radiation Health Center which provides services for the treatment of radiologically contaminated injuries and radiation exposure evaluation.

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.

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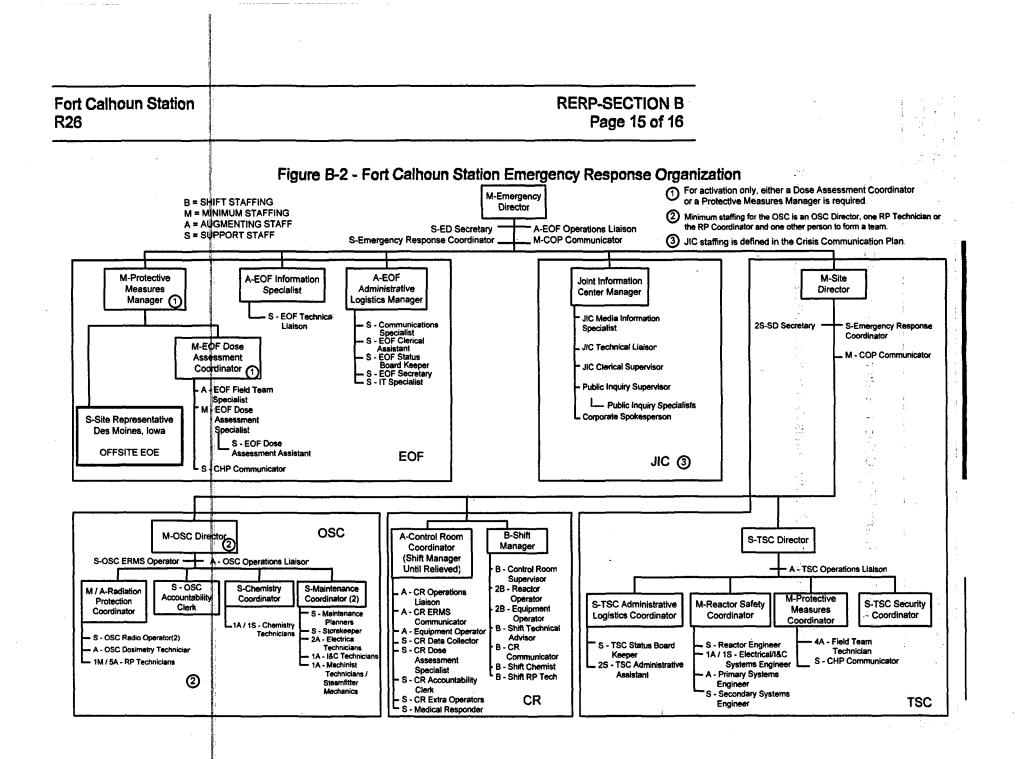
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	NUREG 0654		Omaha Public	Power District
Major Functional Area	Major Tasks	Position Title or Expertise	On Shift Minimum Number/Title	Goals for 1 hour Augmentation Minimum Number/Title
Plant Operations and Assessment of Operational Aspects		Shift Manager (SRO) Shift Foreman (SRO) Control Room Operators Auxiliary Operators	1 Shift Manager (SRO) 1 Control Room Supervisor(SRO) 2 Reactor Operators (RO) 2 Equipment Operators	land that so a fi
Emergency Command and Control (Emergency Coordinator)*		Shift Technical Advisor, Shift Manager or designated Facility Manager	1** Shift Manager	1 CR Coordinator OR 1 Site Director OR 1 Emergency Director
Notification/ Communication	Notify License, State local and Federal personnel and maintain communication		1 Control Room Communicator	1 CR 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. Technician 1 Chemistry Technician	1 Emergency Director 1 Prot. Meas. Coord 4 Field Team Technicians 2 R.P. Technicians 2 R.P. Technicians 1 Chemistry Technician
Plant System Engineering, Repair and Corrective Actions	Technical Support	Shift Technical Advisor Core/Thermal hydraulics Electrical Mechanical	1 Shift Technical Advisor	1 Reactor Safety Coord 1 Electrical and I&C Engineer 1 Primary Systems Engineer
	Repair and Corrective Actions	Mechanical Maintenance Rad Waste Operator Electrical Maintenance Instrument and Control (I&C) Technician	1** Equipment Operator 1** Equipment Operator	 Machinist OR Steam Fitter Mechanic Equipment Operator Electrical Maintenance Technicians 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 Technicians	2** R.P. Technicians	2 R.P. Technicians 1 R.P. Coordinator 1 Dosimetry Technician
Firefighting			Fire Brigade per Technical Specifications	Blair Fire Department
Rescue Operations and First Aid			2** Equipment Operators	Blair Rescue Squad
Site Access Control and Personnel Accountability	Security, Firefighting, communications, personnel accountability	Security Personnel	All per Security Plan	

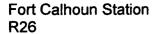
Personnel accountability
 Personnel accountability
 Emergency Command and Control responsibility is transferred in accordance with Section B of this plan.
 ** May be provided by Shift personnel assigned other functions.

Figure B-1 - Normal Fort Calhoun Station Management Organization

The Fort Calhoun Organization is described in Chapter 12 of the USAR.



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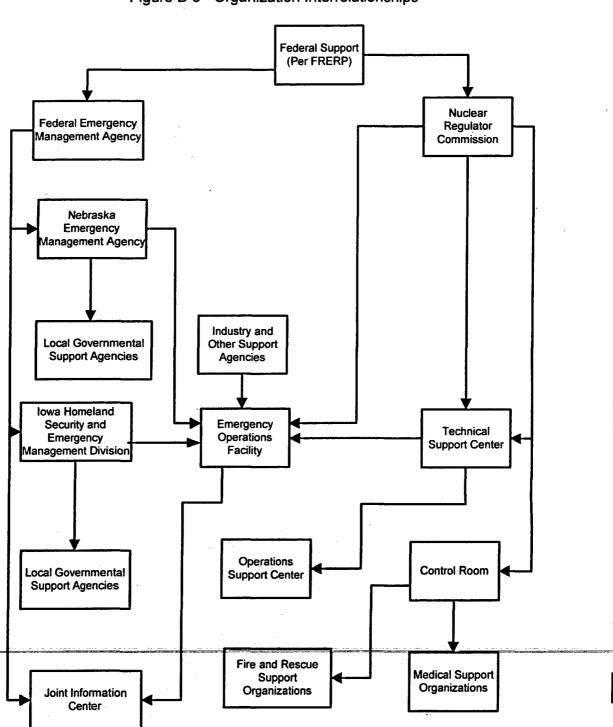


Figure B-3 - Organization Interrelationships

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RERP-SECTION C

EMERGENCY RESPONSE SUPPORT AND RESOURCES

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Editorial Correction (a)	Page 5 (05-16-06)	
Issue Date	03-03-05 3:00 pm	

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1. FEDERAL RESPONSE

1.1 Personnel Authorized to Request Federal Assistance

The Emergency Director typically coordinates with the states to secure federal assistance. However, the Emergency Director may also request federal assistance directly, if timely assistance has not been provided as requested by the states. The states will be kept informed of such requests.

1.2 Federal Response Organizations

The Federal Radiological Emergency Response Plan (FRERP) and the Federal Response Plan (FRP) outline the federal response to any type of emergency, including an emergency at a fixed nuclear facility. Some of the typical federal organizations which could respond to an emergency at the Fort Calhoun Station are as follows:

1.2.1 U.S. Coast Guard

Upon notification, the U.S. Coast Guard will control traffic on the Missouri River in the area of Fort Calhoun Station. They will provide waterborne patrols for extended periods if contamination levels persist.

A U.S. Coast Guard cutter is based at the Florence Boat Yard, approximately 18 river miles downstream of the Fort Calhoun Station.

1.2.2 U.S. Environmental Protection Agency (EPA)

Upon request, the EPA will provide trained manpower to assist in reviewing survey data, offsite evaluations and advise on protective actions for the public. They also provide assistance in the collection and analysis of environmental samples.

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1.2.3 U.S. Department of Energy (DOE)

DOE is the technical support branch of the Federal Radiological Emergency Response Plan (FRERP). DOE would typically be the agency in charge of initial establishment and control of the Federal Radiological Monitoring and Assessment Center (FRMAC).

Some of the capabilities of DOE and the FRMAC operations are as follows:

- A. Support to the state(s) in the coordination of offsite radiological monitoring assessment, evaluation, and reporting activities of all federal agencies during the initial phases of an accident and maintain a technical liaison with the states and local agencies with similar responsibilities.
- B. Ensure the orderly transfer of responsibility for coordinating the intermediate and long term radiological monitoring function at the FRMAC to EPA after the initial phases of the emergency.
- C. Provide the personnel and equipment required to coordinate and perform the offsite radiological monitoring and evaluation activities.
- D. Assist the NRC in assessing the accident potential and in developing technical recommendations on protective measures.
- E. Maintain a common set of offsite radiological monitoring data and provide this data and interpretation to the NRC and to appropriate state and local agencies requiring direct knowledge of radiological conditions and monitoring results.
- F. Provide consultation and support services to all other entities (e.g. private contractors) having radiological monitoring functions and capabilities.
- G. Assist other federal, state and local agencies by providing technical and medical advice concerning treatment of radiological contamination.
- H. Provide telecommunications support and capabilities.
- I. Assist other federal agencies in developing and establishing guidelines on effective systems of emergency radiation detection and measurement, including instrumentation.

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1.2.4 U.S. National Weather Service (NWS)

The National Weather Service operates on a twenty-four (24) hour per day basis. Upon request, this organization can provide the Fort Calhoun Station with meteorological conditions including predicted temperature inversions, precipitation, wind patterns and velocity.

1.2.5 U.S. Nuclear Regulatory Commission (NRC)

The NRC becomes the Lead Federal Agency (LFA) in a response to a fixed nuclear facility, such as the Fort Calhoun Station. In their role as LFA, the NRC will directly coordinate response activities with OPPD and determine the need for appropriate federal response organizations. The NRC will perform the function of LFA from several response locations including the NRC Operations Center, Region IV's Incident Response Center, all OPPD Emergency Response Facilities (once a site team has arrived), and other federal response facilities established.

- 1.2.6 Federal Emergency Management Agency (FEMA)
 - FEMA is responsible for coordinating the non-technical federal support to state and local governments which could include such tasks as logistics and telecommunications. The senior FEMA official on the scene will notify the federal agency(ies) most capable of meeting the state and local governmental needs. FEMA would take the lead at the federal Disaster Field Office, if such location is established. Fort Calhoun Station is located within FEMA, Region VII.

1.2.7 Federal Aviation Administration (FAA)

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The FAA controls and directs air traffic in and around the affected area. The FAA has the authority to close the area surrounding the Fort Calhoun Station to all non-response air traffic.

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The U.S. Department of the Interior, Branch of Global Seismology has the capability to monitor and provide specific seismic activity data should such an event occur in the vicinity of the Fort Calhoun Station.

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1.3 Response Times

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It is anticipated that response time will be based on the level of assistance provided. For example, information on upcoming weather conditions would be expected to be available in a matter of minutes over the telephone from the National Weather Service. Conversely, radiological assistance from the Department of Energy would be expected to take considerably longer. It is expected that the federal assistance requested would be available available within 8 to 72 hours.

2. <u>RESOURCES TO SUPPORT RESPONDING AGENCIES</u>

Resources are provided by OPPD in order to support the various federal organizations which respond to an emergency as follows:

2.1 Air fields are available for the use of the radiological monitoring teams as follows:

- 2.1.1 Eppley Air Field, 18 miles South of Fort Calhoun Station, on Abbott Drive in Sector G.
- 2.1.2 Eagle Field (City of Blair's Air Field), seven (7) miles Southwest of Fort Calhoun Station on State Hwy. 133 in Sector K.
- 2.1.3 North Omaha Airfield, eleven (11) miles South Southeast of Fort Calhoun Station, on North 72nd street in Sector H.
- 2.2 A laboratory for radioisotopic analysis is available at the Fort Calhoun Station and Cooper Nuclear Station near Brownsville, Nebraska.
- 2.3 A laboratory for non-radiological chemical analysis is available at the Fort Calhoun Station and OPPD's North Omaha Power Station.
- 2.4 Onsite and offsite survey teams with necessary radiation monitoring instruments are available.
- 2.5 A boat is available for obtaining river samples.
- 2.6 Space and communication lines have been set aside to accommodate some federal agencies at the Control Room, Technical Support Center, Emergency Operations Facility, and Joint Information Center.
- 2.7 Electrical and communication access is available at the Emergency Operations Facility for the federal mobile analytical laboratory.

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3. SITE REPRESENTATIVES

The Nebraska State Governor's Authorized Representative (GAR) reports to the state Field Command Post, located at OPPD's Emergency Operations Facility. The GAR is in direct contact with OPPD personnel and has the authority to approve and issue all protective actions for the public in the State of Nebraska.

The State of Iowa's Governor's Authorized Representative (GAR) typically remains in the State Emergency Operations Center. The Iowa GAR has the authority to approve and issue all protective actions for the public in the State of Iowa. A command and control telephone link exists between this position and OPPD's EOF. If personnel are available, an Iowa liaison is sent to work directly with the staff at the EOF.

An OPPD Site Representative is available for dispatch from the utility to the Iowa State EOC. This position can be staffed on a 24 hour a day basis.

4. RADIOLOGICAL ASSISTANCE

4.1 Nebraska Public Power District (Cooper Nuclear Station)

The Cooper Nuclear Station is capable of providing a backup facility in the event Fort Calhoun's radiochemistry laboratory is not functional. The Cooper Station's radiochemistry laboratory is equipped to do gross and isotopic determinations on radionuclides in concentrations and counting geometries necessary for nuclear power plant operation and emergency monitoring. They will provide analysis of liquid, air particulate and cartridges on a priority basis after receiving the sample.

Additionally, Cooper Station could provide monitoring teams equipped with air sampling, radiation and contamination monitoring equipment.

4.2 Contractor Assistance

In the event of an emergency, it is anticipated that further assistance could be contracted directly from firms currently being utilized by OPPD for non-emergency work at the Fort Calhoun Station or through the assistance of such organizations as the Institute of Nuclear Power Operations (INPO).

4.3 The analysis of field monitoring data by the states is specified in each respective state plan. OPPD field monitoring data can be analyzed by an independent facility providing such services.

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Fort Calhoun Station Unit No. 1

RERP-SECTION F

RADIOLOGICAL EMERGENCY RESPONSE PLAN

EMERGENCY COMMUNICATIONS

Change No.	EC 35103
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Requestor	N/A
Preparer	R. McKay
Editorial Correction (a)	Pages 6, 7, 8, 9 and 11 (05-16-06)
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EMERGENCY COMMUNICATIONS

1. INTRODUCTION

This section describes the available communications for use among the principal response organizations and between the Omaha Public Power District emergency response facilities. Provisions for 24-hour per day notification to and activation of the state and local emergency response organizations are discussed in Section E of this plan. Also discussed in Section E are the provisions for activating Omaha Public Power District emergency response response personnel. Provisions for periodic testing of the emergency communications system are described in Section N of this plan.

2. <u>COMMUNICATIONS SYSTEMS</u>

A number of varied communications systems are available for communications between emergency response facilities. These systems are described in this section and are summarized in Figure F-1.

In the conduct of drills and exercises, OPPD may make use of its training simulator to provide a broad range of Control Room like amenities, without impacting the operating FCS Control Room. The communications equipment in the FCS Control Room is, for the most part, duplicated in the simulator.

Each emergency response facility and the personnel responsible for 24 hour communications in each facility is listed below:

EMERGENCY FACILITY	PRIMARY/ALTERNATE COMMUNICATIONS RESPONSIBILITY		
Control Room Fort Calhoun Station	Shift Manager (Control Room Coordinator)/Control Room Communicator		
TSC, Fort Calhoun Station	Site Director/TSC COP Communicator		
EOF, North Omaha Station	Emergency Director/EOF COP Communicator		
EOC, State of Nebraska	Operations Officer/Communications and Warning Officer		
Forward Command Post, State of Nebraska	Nebraska Emergency Management Agency Director/Asst Nebraska Emergency Management Agency Director		
EOC, Washington Cnty (Nebraska)	Washington County Communications Center/County Emergency Management Director		

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EMERGENCY FACILITY	PRIMARY/ALTERNATE COMMUNICATIONS RESPONSIBILITY
EOC, State of Iowa	Director, Iowa Emergency Management Division/National Guard Adjutant General
Forward Command Post State of Iowa	Harrison County Sheriff's Department/State Liaison Officer
EOC, Harrison County (Iowa)	Communications Director/Harrison County Sheriff's Department
EOC, Pottawattamie County (Iowa)	Communications Director/County Emergency Management Director

2.1 Fort Calhoun Station Alarm System

2.1.1 Emergency and Fire Alarms

These alarms are sounded from the Control Room when an emergency requiring ERO activation or fire is declared. Their function is to alert personnel within the Protected Area to an emergency condition.

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2.2 Fort Calhoun Station Paging Systems

2.2.1 The Protected Area paging system (Gaitronics) provides a means of intraplant communications. Stations on this system provide access to the plant paging system and to intercom lines. These stations and speakers are placed throughout the plant including the Control Room, the Technical Support Center and the Operations Support Center.

2.2.2 The Administrative and Training buildings at the Fort Calhoun Station also have public address announcing capabilities. Access to the public address system in either or both locations can be accomplished via the site's telephone system. This system can be used to notify personnel of a plant emergency, and is tied directly into the site's Interactive Notification System (INS).

2.3 Local Private Automatic Branch Exchanges (PABX)

2.3.1 Omaha Public Power District PABXs

Company telephone systems link Omaha Public Power District facilities with those located in Omaha, Nebraska. These systems provide intracompany telephone communications and access to the public telephone network.

The Emergency Operations Facility has installed lines designated for emergency use. These lines are dedicated to specific emergency response positions. Telephone sets for all lines are available in the Emergency Operations Facility.

Trunk lines between the company PABX systems in Omaha and the Fort Calhoun Station PABX systems provide the primary means of communication with the plant. Additional lines can be provided by the local telephone company, as requested.

This system also provides a redundant means of providing emergency notifications to the states and counties, and is the primary backup to the Conference Operations Network (COP).

2.3.2 Fort Calhoun Station PABXs

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These dedicated telephone systems provide communications within Fort Calhoun Station locations.

The Technical Support Center has designated extensions for use during an emergency. They include extensions designated for use by NRC personnel. Additional lines can be diverted from other office areas as required.

Dedicated lines from this system are extended to the Emergency Operations Facility. This system is also connected to the company telephone system in Omaha to provide intracompany telephone communications which are not affected by the public telephone network.

Redundant routing of access to the public telephone network is provided via links to the public system in Blair, Nebraska as well as Omaha.

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2.4 Conference Operations (COP) Network

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This system provides dedicated conference capabilities between the Fort Calhoun Station Control Room, Technical Support Center, Emergency Operations Facility and the Nebraska and Iowa Emergency Operations Centers and the following county locations: Washington (Nebr), Pottawattamie and Harrison (in Iowa).

The Control Room, Technical Support Center and the Emergency Operations Facility are each equipped with a special control station. These control stations are connected directly to equipment which allow group call and individual call capability to the states, counties and other OPPD Emergency Response Facilities.

A voice recorder is installed on this network in the Emergency Operations Facility. Recording capabilities also exist at the Nebraska State Patrol on their voice logging recorder. These provide taped records of communications on this network.

This system is the primary system for making emergency notifications to the state and local government agencies. It is also used to provide follow-up reports and general information to state and county authorities. This system is shown in Figure F-2.

2.5 Conference Health Physics (CHP) Network

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This network provides a dedicated means for communicating radiological information between the Technical Support Center, Emergency Operations Facility, Nebraska and Iowa Emergency Operations Centers and the Nebraska and Iowa Radiological Emergency Response Team Coordinators. The system is shown on Figure F-3.

This system provides the capability for conference conversations between the Technical Support Center or Emergency Operations Facility and any one or all of the agencies on the system. A voice recorder in the Technical Support Center and/or Emergency Operations Facility provides a record of conversations on this system.

2.6 Computerized Dose Assessment System (EAGLE)

Terminals for the EAGLE system are located in the Control Room (including the simulator), the Technical Support Center and the Emergency Operations Facility.

2.7 Facsimile (FAX) Capability

Facsimile machines provide the capability to link the Control Room, Technical Support Center, Operations Support Center, Emergency Operations Facility, Joint Information Center, other OPPD Headquarters facilities, the Nebraska and Iowa Emergency Operations Centers and the Nebraska and Iowa Forward Command Posts. Capability also exists to access any FAX machine via commercial telephone networks.

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The facsimile machines can be used to transmit health physics, operational and dose assessment information from Omaha Public Power District emergency response facilities to state emergency response facilities. They can also be used to disseminate emergency status information to OPPD management. Some of these extensions have voice capabilities and serve as a backup means of voice communications for those locations.

2.8 800 MHz Radio System

A 800 MHz radio communications system links Fort Calhoun Station onsite emergency response facilities, Emergency Operations Facility, plant portable radios, and mobile radios used by radiological monitoring teams. The multi-subfleet/channel system is illustrated by Figures F-4, F-5, F-6, F-7 and F-8.

Figure F-4 illustrates the subfleets available for the Fort Calhoun Station. Figure F-5 illustrates the dedicated subfleet for the Emergency Response Organization. Figure F-6 illustrates the shared subfleet which the ERO can utilize during emergencies. Figure F-7 provides the details for the "Talk-Around" capability which can be utilized when the 800 MHz trunking system is out of service. Figure F-8 summarizes the subfleets assigned to the Fort Calhoun Station.

2.9 NRC Emergency Notification System (FTS-ENS) and an address of the second statement of the second s

This NRC Operations Center is contacted via this telephone network. The FTS-ENS is a portion of the Federal Telecommunications System (FTS) and is located in the Control Room, Technical Support Center and Emergency Operations Facility. It provides plant operations information to the NRC Operations Center, in Rockville, Maryland.

2.10 NRC Health Physics Network (FTS-HPN)

The FTS-HPN is a portion of the Federal Telecommunications System (FTS) and is located in the Technical Support Center and Emergency Operations Facility. The network is used to exchange radiological and dose assessment information between NRC facilities and OPPD.

FORT CALHOUN STATION

2.11 Writeboard System

Equipment consisting of a writing board, monitors, modems, and computer hardware provides one way transmission of written data from the Technical Support Center to the Operations Support Center and Emergency Operations Facility.

2.12 State of Nebraska Emergency Management Radio System

The Emergency Operations Facility is equipped with various radio equipment for use by Nebraska Emergency Management personnel. This equipment may be used either alone or in conjunction with the State of Nebraska Emergency Management Mobile Van.

2.13 State of Iowa Emergency Management Radio System

The Emergency Operations Facility can support radio equipment for use by Iowa State Emergency Management personnel. This equipment may be used either alone or in conjunction with the State of Iowa Emergency Management Mobile Van.

2.14 Management Operations (MOP) Network

This system (similar to the COP and Ops Liaison Network) provides dedicated conference capability between the Control Room Coordinator, TSC Site Director, OSC Director, EOF Emergency Director and the JIC Manager. The purpose of the system is to provide information flow between the directors of all the emergency facilities.

The system allows conferencing without dialing, each set is capable of conferences and individual call capability.

2.15 Joint Information Center Hot Line

A dedicated telephone circuit is provided between the Emergency Operations Facility and Joint Information Center. The telephone sets are equipped with a blank dial plate. Lifting either handset causes a connecting ring at the other set.

This system provides a means for uninterrupted private communications for coordination of information releases to the public.

2.16 NAWAS

NAWAS equipment in the Control Room provides a redundant means of providing emergency notifications to the States of Nebraska and Iowa. It also provides the Control Room personnel with weather information.

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FORT CALHOUN STATION

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RADIOLOGICAL EMERGENCY RESPONSE PLAN

2.17 Emergency Response Message System (ERMS)

A network of computer terminals is used to link the Technical Support Center, Operations Support Center and Emergency Operations Facility. It provides rapid dissemination of plant status information between facilities and ensures consistency of information at all facilities. The JIC is also equipped with a monitor which provides read-only capability.

2.18 Telephone Service Pedestal for State Mobile Communication Vehicles

A telephone service pedestal is located outside of the Emergency Operations Facility near the designated parking area for the mobile communication vehicles. This pedestal is fed by a 12-pair cable from the Emergency Operations Facility and allows quick connection of various telephone facilities to the mobile vehicles. Several telephone lines and dedicated communication facilities are prewired and operational. Spare pairs are available to add additional telephone facilities quickly as the need arises.

2.19 Telephone Junction Box for NRC Mobile Vehicle

A telephone junction box is located on the outside wall of the Emergency Operations Facility near the designated parking area. This junction box is fed by a 12 pair cable and is equipped with four standard modular telephone jacks. These jacks are prewired to a distribution frame and allow quick connection of telephone lines to support the NRC as required. Additional jacks can be added up to the 12 pair capacity of the feeder cable.

2.20 Blair Industrial Co-Op, Emergency Notification System

This system provides a centralized communication network where emergency information can be communicated between member industries located in close proximity to Fort Calhoun Station. The system features a conference alerting option, which calls all phones on the system.

The members of the Co-Op are responsible for developing their own emergency procedures that comply with federal, state and local requirements. The system is intended to be used when an event may impact member industries, or if the event is significant enough to warrant news media notifications.

2.21 Operations Liaison Network

This system provides dedicated conference capabilities between the Fort Calhoun Station Control Room/Simulator, TSC, OSC, EOF and JIC. The purpose of the system is to provide operational information from the Control Room to the other facilities for the purpose of developing response plans, determining emergency classifications and implementing assistance to the Control Room.

The system allows conferencing without dialing, and thus permits rapid access to the conference by the Operations Liaisons. Each station is equipped with group call and individual call capability.

2.22 Emergency Response Data System (ERDS)

This system provides selected ERFCS data to the NRCs Operations Center in Rockville Maryland for the purpose of evaluating plant conditions. Certain data points from the ERFCS are included in the ERDS data library, and when activated, these data points are transmitted via modem to the Operations Center. The system is manually activated from any ERFCS computer terminal, and is required to be activated at an ALERT or higher classification.

2.23 Interactive Notification System (INS)

This system provides rapid notification to Emergency Response Organization personnel in the event of an emergency where the ERO is activated. The system is also used to perform the Management Notification function, and can be adapted to perform other notification functions as determined necessary by the Fort Calhoun Station. A backup ERO notification process is available in the event of failure of the INS.

The system is activated using the PABX system, normally from the Control Room. The system contains logic that 1) initiates a call-out to ERO members at home or work locations, depending on the time of day and day of the week, 2) Activates pagers of those ERO positions that wear pagers and 3) initiates an announcement of the emergency condition through the Training Center and Administration Building public address system.

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3. COMMUNICATIONS WITH MEDICAL SUPPORT FACILITIES

Fort Calhoun Station emergency response organization personnel can communicate with medical support facilities, Washington County Emergency Communications Center or the University of Nebraska Medical Center, via the site telephone systems described earlier in this section.

Non-OPPD radio systems provide communications between medical support facilities and mobile rescue units as well as inter-unit communications. These radio systems have the capability to use the common medical emergency frequency which ensures coordinated communications.

Figure F-1 - Summary of Communications Systems

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	Simulator (Training)				4					EOF)			lowa FCP (Harrison County EOC)						
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Control Room	Control	Technical Support Center	Operations Support Center	ē	Joint Information Center	FCS Security	OPPD Headquarters	Ч	Nebraska EOC	Nebraska FCP (North Omaha	Washington	lowa EOC	g	Harrison County EOC	Pottawatamie County EOC	NRC - Headquarters		0	
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		•		•					•	•		٠							CHP Network (HP Information)
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RERP-SECTION F

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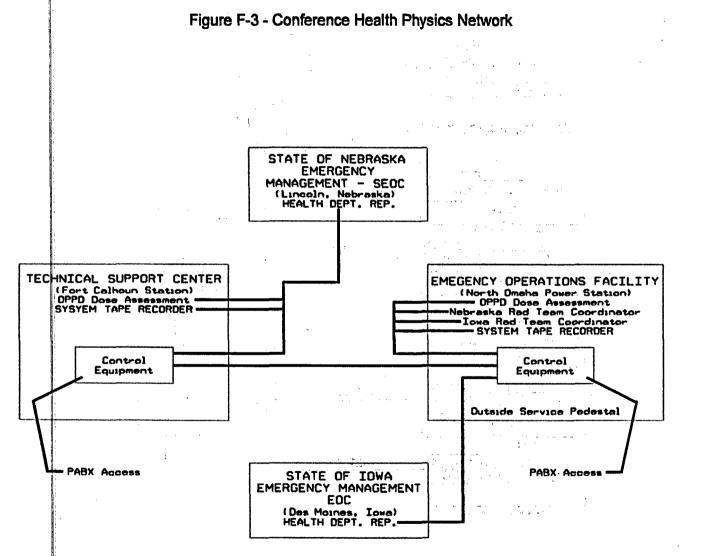
Figure F-2 - Conference Operations Network

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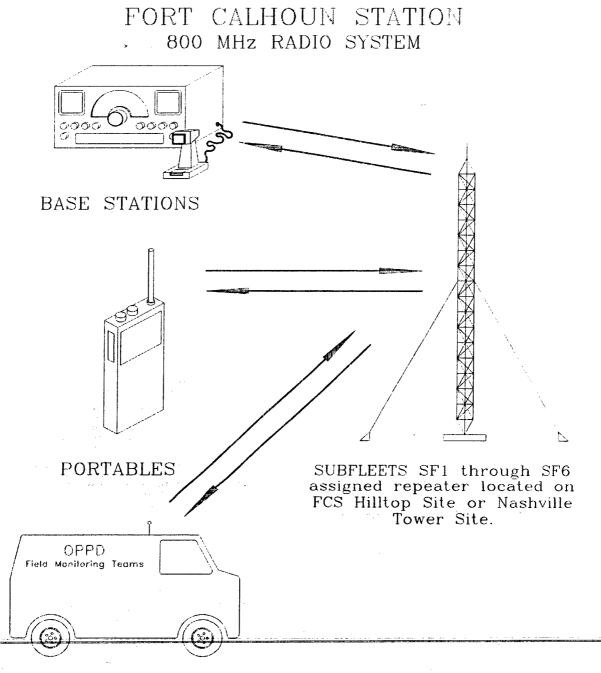
RERP-SECTION F PAGE 13 OF 18



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RERP-SECTION F PAGE 14 OF 18

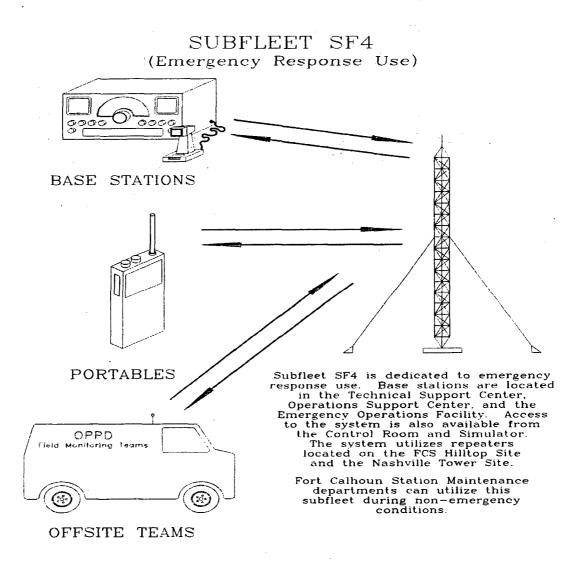
Figure F-4 - OPPD/Fort Calhoun Station 800 MHz Radio System



OFFSITE TEAMS

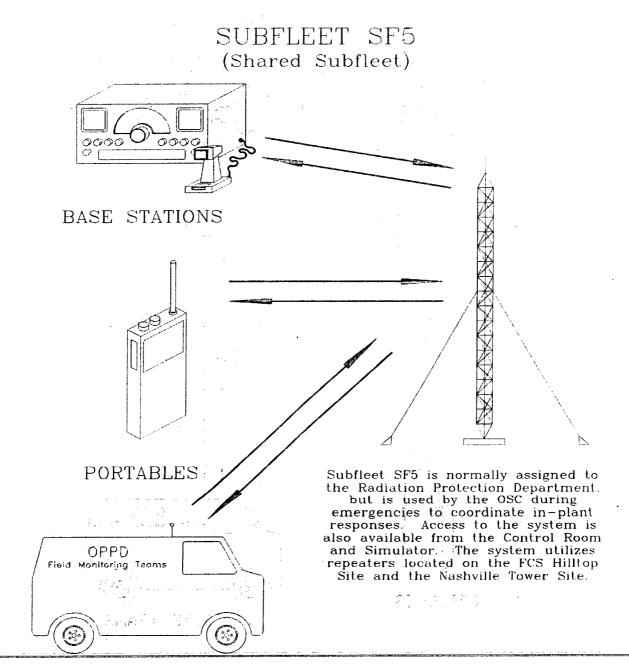
RERP-SECTION F PAGE 15 OF 18

Figure F-5 - Fort Calhoun Station Subfleet - SF4



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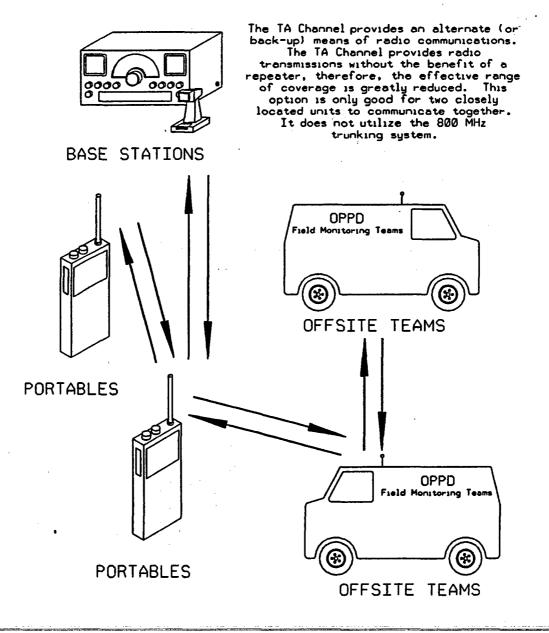




OFFSITE TEAMS

Figure F-7 - Fort Calhoun Station Talk-Around Channel (TA)





SUBFLEET	TAG	NORMAL USE	EMERGENCY USE	NOTE (1)	NOTE (2)
Subfleet 1	SF1	Security - Primary	Security - Primary	1	A
Subfleet 2	SF2	Security - Secondary	Security - Secondary	1	В
Subfleet 3	SF3	Operations	Operations	1	С
Subfleet 4	SF4	Emergency Planning/ Maintenance	Field Team Control	1	D
Subfleet 5	SF5	Radiation Protection/ Chemistry	In-Plant Team Control	1	E
Subfleet 6	SF6	Maintenance	In-Plant Team Control	1	F
Talk Around	TA	Portable to Portable	Back-up Communications	3	А

Figure F-8 - Summary of 800 MHz Radio Uses

NOTE (1): Position of Toggle Switch on Radio **NOTE (2):** Position of Rotary Switch on Radio

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RERP-SECTION G

PUBLIC EDUCATION AND INFORMATION

Change No.	EC 35103	
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Preparer	R. McKay	
Editorial Correction (a)	Pages 3 and 4 (05-16-06)	
Issue Date	03-03-05 3:00 pm	

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1. PUBLIC INFORMATION CONTENT AND DISSEMINATION

1.1 Public Information Content

The Omaha Public Power District (OPPD) Corporate Communications Division has coordinated with the States of Nebraska and Iowa in the preparation and dissemination of educational information. A brochure entitled Fort Calhoun Nuclear Station Emergency Planning Information incorporates the following information:

- 1.1.1 A description of natural background and manmade radiation, including estimated annual doses from various sources of radiation.
- 1.1.2 Public warning procedures and use of radio and television following an emergency at the Fort Calhoun Station.
- 1.1.3 Radiation protection, including such protective actions as in-house sheltering and evacuation.
- 1.1.4 Special evacuation notes, including special needs of the handicapped, medical and nursing home patients, registration centers, evacuation routes and a Sub Area map of the EPZ.
- 1.1.5 Information concerning the primary Emergency Alert System.
- 1.1.6 Additional protective actions including ad hoc respiratory protective devices.
- 1.1.7 A list of contact points to obtain additional information.
- 1.2 Public Information Dissemination

The Public Information Brochure is distributed in written form annually by mail to the permanent adult population within an approximate 10-mile radius of Fort Calhoun Station. A general distribution to reach the transient population is achieved by posting information in public areas and by placing supplies of prepared written material in motels, service stations, and government buildings. Media advertisements, utility bill inserts, telephone tape messages, news releases, and public seminars may also be utilized for public education and information.

An Emergency Planning Test, verifies the content and dissemination of this information.

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2. NEWS MEDIA COORDINATION AND FACILITIES

There are two (2) locations available for use of the news media. The Joint Information Center (JIC) is the primary facility for the release of all information; the Emergency Operations Facility (EOF) has limited space for press briefings and may be used on a selective basis. The Corporate Crisis Communication Plan provides the guidance for the operation of the Joint Information Center during emergencies. This plan is reviewed annually in accordance with an Emergency Planning Test.

2.1 Joint Information Center (JIC)

The primary information point is the Joint Information Center located within OPPD's Energy Plaza at 444 South 16th Street Mall, Omaha, Nebraska. This center is activated for either a Site Area Emergency or General Emergency and will accommodate Joint Information Center personnel as well as local, State and Federal public information personnel.

For Classifications below Site Area Emergency, the Division Manager-Corporate Communications shall determine the corporate response for media coordination efforts.

The Joint Information Center also serves as the public inquiry center for OPPD, State and Federal authorities. The Public Inquiry Supervisor will serve as OPPD's representative in this area.

2.2 Emergency Operations Facility Briefing Room

A secondary facility is located in the Emergency Operations Facility located at the North Omaha Power Station. However, the Joint Information Center is the preferred point of news media information.

The EOF Briefing Room was constructed as working space for 25 news correspondents. It is anticipated that space in this facility will be allotted for the two (2) national wire services and for the local media which routinely cover OPPD activities. Remaining space will be allocated to the national and regional media on a pool basis.

Fort	Calhoun	Station
R12		

3. EMERGENCY CLASSIFICATION INFORMATION RELEASES

Following the classification of an emergency, Corporate Communications Division representatives will be informed of the emergency action level invoked at the plant and the reason or reasons thereof. Once such notification has been made, release of information to the news media will be coordinated by the Division Manager - Corporate Communications or the Joint Information Center Manager. That position will also coordinate the timely exchange and release of information with the official spokespersons for Federal and State agencies. The JIC Manager will report directly to the Emergency Director. An JIC Technical Liaison at the Joint Information Center will assist in nuclear related information matters. The JIC Technical Liaison will also be in direct contact with the EOF Information Specialist or the EOF Technical Liaison who will provide prompt and accurate information regarding plant status. The Corporate Crisis Communication Plan activates and augments the JIC staff. During all emergency classifications, the Corporate Spokesperson is the official designated spokesperson for OPPD.

4. NEWS MEDIA EXPOSURE TO EMERGENCY PLANNING INFORMATION

The Corporate Communications Division mails an annual information packet or conducts an annual seminar to acquaint the local news media with the operation of Fort Calhoun Station and its emergency plan, including the public information procedures to be followed in an emergency. The mailing\seminar also provides educational information concerning radiation, and nuclear related subjects deemed appropriate. An Emergency Planning Test verifies the transmittal of the information packet or conduct of the seminar to the local news media outlets.

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NUREG/RERP/IMPLEMENTING PROCDURE CROSS REFERENCE LIST

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Issue Date	03-03-05 3:00 pm	

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
A. Assignment of R	Responsibility		
A.1.a	Identify the State, Local, Federal and private sector organizations (including utilities) intended to be a part of the ERO.	A 1.1-1.8	N/A
A.1,b	Each organization shall specify its concept of operations and its relationship to the total effort.	A 2.0, C 1.0, 2.0, 3.0 Appendix A	EOF-1, OSC-2/21, TSC-1
A.1.c	Block diagram of organizational interrelationships.	FIG. A-1	N/A
A.1.d	Identify a specific individual (by title) who shall be in charge of the emergency response.	A 2.0	OSC-2
A.1.e	Provide for 24-hr per day response, including communications links.	A 1.0	RR-11/13/17/17A/21/29/66/ 87
A.2.a	State/Local applicability	N/A	N/A
A.2.b	State/Local applicability	N/A	N/A
A.3	Letters of Agreement	Appen. A	EPT-22
A.4	Capability of continuous 24-hour operations. Identify, by title, the individual in the principal organization responsible for continuity of resources.	A 1.0, 2.0	RR-11/13/17/17A/21/29/66/ 87

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RERP-APPENDIX C

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
B. Onsite Emerge	ncy Organization		kontak landa di kana di
B.1	Specify the onsite emergency organization of plant staff personnel for all shifts and its relation to the responsibilities and duties of the normal staff complement.	B ^{2.1}	OSC-2
B.2	Designate an individual as emergency coordinator who is on shift at all times.	B 7.1, 7.2	OSC-2
B.3	Identify a line of succession for the emergency coordinator position and identify the specific conditions for higher level utility officials assuming this function.	B 7.0	EOF-1/7 OSC-1/2 TSC-1
B.4	Specification of responsibilities, and designation of which may not be delegated.	B 6.2	EOF-7/11/19/21 OSC-1/2
B.5	Positions or titles and major tasks to be performed by the persons assigned to the functional areas of emergency activity.	B 8/9/10/ 11/12	EOF-1/3/6/7/11/19 OSC-1/2/9/15/21 RR-11/13/17/17A/19A/21/ 21A/22/22A/25/29/87 TSC-1/8
B.6	Interfaces between and among the onsite, offsite, corporate, state and local government response organizations.	B-13	N/A
B.7	Each licensee shall specify the corporate, management, admin., and technical personnel who will augment plant staff in Table B-1 and in the following areas:	Table B-1 B 4.0	OSC-2
B.7.a	Logistics support, e.g., trans, comm, quarters, food, water, special equipment and supplies purchase;	B 9.0, 11.0 Table B-2	RR-17A/29
B.7.b	Technical support for planning reentry and recovery operations;	B 6.0 M 6.0	EOF-19 OSC-2
B.7.c	Management level interface with government authorities; and	B 13	OSC-2

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)		
B.7.d	Release of information to news media during an emergency (coordinated with governmental authorities).	B 12,13	OSC-2 Crisis Comm. Plan		
B.8	Specification of contractor and private organizations to provide assistance.	A 1.0, B-13, B-15, Fig. B-3, Appen A	RR-17A, RR-29 EPT-22		
B.9	Expected services from local agencies e.g., police, fire, ambulance, medical, hospital.	A 1.0 Appen A B 15, Fig B-3 RERP Sec L	EPT-22		

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2.

NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
C. Emergency Res	ponse Support and Resources		
C.1	Incorporation of Federal response into the operational plan:		
6 C.1.a	Specific persons to request Federal assistance (See A.1.d and A.2.a)	C1.1, B 6.3.1	OSC-2, Att 6.7
C.1.b	Specific Federal resources expected and expected times of arrival, and	C 1.2-1.3	N/A
C.1.c	Specific licensee, state, local resources to support Federal response, air fields, command posts, tel lines, radio frequencies, and telecommunications centers.	C 2.0	N/A
C.2.a	State/Local Applicability	N/A	N/A
C.2.b	Licensee representative to offsite EOC's	C 3.0	RR-22 Att 6.2
C.3	Radiological laboratories, general capabilities and expected availability to provide radiological monitoring and analyses services which can be used in an emergency.	C 2.2 4.0	N/A
C.4	Identify Nuclear and other facilities, organizations or individuals which can be relied upon in an emergency to provide assistance. Such assistance shall be identified and supported by appropriate letters of agreement.	C 4.0, Appen A	RR-29 Att 6.1, EPT-22

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)	
D. Emergency C	lassification System			
D.1	Establish an Emergency Action Level Scheme and Emergency Classification scheme.	D 2.0	OSC-1	
D.2	Initiating conditions shall include NUREG-0654, Appendix 1 conditions and all FSAR postulated accidents.	D 1.0	OSC-1	
D.3	State/Local applicability	N/A	N/A	
D.4	State/Local applicability	N/A	N/A	

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s
E. Notification Me	thods and Procedures	Standard (* 1997) 1997 - Standard (* 1997)	
E.1	Notification procedures consistent with EALs including a means for verification of messages.	E 2.0	OSC-1/2
E.2	Procedures for alerting, notifying and mobilizing emergency response personnel.	E 2.0	OSC-2
E.3	Licensee and state/local establish content of the initial messages, and shall contain: class, release, potentially affected population, and if PARs are needed.	E 3.1	OSC-2
E.4	Provisions for follow-up messages, and shall contain the following:	E 3.2	OSC-2/15, EOF-6
E.4.a	Location of incident, and name and telephone number (or communications channel identification) of caller;	E 3.2	OSC-2/15, EOF-6
E.4.b	Date/time of incident;	E 3.2	OSC-2/15, EOF-6
E.4.c	Class of emergency;	E 3.2	OSC-2/15, EOF-6
E.4.d	Type of actual/projected release, and estimated duration/impact times;	E 3.2	OSC-2/15, EOF-6
E.4.e	Estimate of radioactive material released or being released and the points and height of releases.	E 3.0	OSC-2/15, EOF-6
E.4.f	Chemical and physical form of material, estimates of quantities/concentration of noble gases, iodines, and particulates;	E 3.0	OSC-2/15, EOF-6
E.4.g	Met conditions at appropriate levels: wind speed, direction (to and from) stability, precip, if any;	E 3.0	OSC-2/15, EOF-6

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
E.4.h	Type of actual projected does rates at site boundary, projected integrated dose at site boundary:	E 3.0	OSC-2/15, EOF-6
E.4.i	Projected dose rates and integrated dose at 2, 5, and 10 miles, include the sector(s) affected;	E 3.0	OSC-2/15, EOF-6
E.4. j	Estimate of any surface contamination inplant, onsite, offsite;	E 3.0	OSC-2/15, EOF-6
E.4.k	Licensee emergency response actions underway;	E 3.0	OSC-2/15, EOF-6
E.4.1	Recommended emergency actions, including protective measures;	E 3.2	OSC-2/15, EOF-6, EOF-7
E.4.m	Request for any needed onsite support by offsite organizations, and;	E 3.0	OSC-2/15, EOF-6, EOF-7
E.4.n	Prognosis for worsening/termination based on plant information.	E 3.2	OSC-2/15, EOF-6, EOF-7
E.5	State/Local applicability	N/A	N/A
E.6	Notification/prompt instructions to the public. (ANS)	E 4.0	EOF-24, RR-29, EPT-1/2/3
E.7	Written messages for the public, consistent with the EALs, to include ad hoc PARs.	E 5.0	OSC-2 EOF-7

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NL	JREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
F.	Emergency Cor	nmunications		
	F.1.a	Provision for 24 hour notification to and activation of the State/local ER network, with telephone link and backup, and 24-hour manning of	E 2.0 F 1.0 F 2.0 F 2.3	OSC-2/15
···- •		communication links that initiate emergency response actions;	F 2.4	
	F.1.b	Communications with contiguous states/locals;	F 2.0, 2.3, 2.4, Fig F-1, F-2	OSC-2/15
	F.1.c	Communications with Federal EROs;	F 2.3, 2.9, 2.10	OSC-2, OSC-15, RR-24, TSC-1
	F.1.d	Communication between the plant, EOF, state and local EOCs, and rad monitor teams;	F 2.4, 2.5, 2.8, 2.11, 2.17	OSC-15, EOF-23, RR-72/95
	F.1.e	Provision for alerting or activating emergency personnel in each response organization, and	E 2.0	OSC-2/15, RR-17A/29
	F.1.f	Communication (by licensee) with NRC HQ and Regional Office EOC and the EOF and Rad Mon Team Assembly area.	F 2.3, 2.8, 2.9, 2.10, 2.22	OSC-15
	F.2	Each organization shall ensure that a coordinated comm link for fixed and mobile medical support facilities exists.	F 3.0	FCSG-15
	F.3	Each organization shall conduct periodic testing of the entire emergency communications system. (See also H.10, N.2.a and Appendix 3).	N 2.1	EPT-5/6/7/8/9

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s
G. Public Educatio	n and Information	· · · · · ·	•.
G.1	Each organization shall provide a coordinated periodic (at least annually) dissemination of information to the public re: how they will be notified, and what their actions should be.	G 1.0	Corporate Crisis Communication Plan EPT-23
G.2	The public information program shall provide permanent and transient adult population within the EPZ an adequate opportunity to become aware of the information annually. This section also makes reference to: Signs, decals, posted notices, for hotel, motels, gas stations, and phone booths).	G 1.0	Corporate Crisis Communication Plan EPT-23
G.3.a	Media contact point during an emergency (i.e., JIC, etc).	G 2.0	Corporate Crisis Communication Plan
G.3.b	Space for limited number of news media at the EOF.	G 2.0	Corporate Crisis Communication Plan
G.4.a	Each organization shall have a spokesperson.	G 3.0	Corporate Crisis Communication Plan
G.4.b	Each organization shall establish arrangements for timely exchange of information among designated spokes persons.	G 3.0	Corporate Crisis Communication Plan
G.4.c	Each organization shall establish coordinated arrangements for dealing with rumors.	G 2.1	Corporate Crisis Communication Plan
. G.5	Each organization shall conduct coordinated programs at least annually to acquaint news media with the emergency plans, information concerning radiation, and points of contact for release of public	G 4.0	EPT-29

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
H. Emergency Faci	lities and Equipment	tras statistica. National statistica	e da la construir de la constru Construir de la construir de la c
1971 H.1 1. S.	Each licensee shall establish a TSC and an OSC.	n for H 1.0 , nave 34 No fo ^{r for} 3.0	OSC-21, TSC-1
H.2	Establish an EOF.	H 2.0	EOF-1
H.3	State/Local applicability	N/A	N/A
H.4	Timely activation of the facilities and centers described in the Plan.	H 1.3, 2.3, 3.3, 4.3	EOF-1, OSC-21, TSC-1
H.5	Each licensee shall identify and establish onsite monitoring systems that are to be used to initiate emergency measures, in accordance with Appendix 1, as well as those used to conduct assessment. The equipment shall include:		
H.5.a	Geophysical phenomena monitors, (e.g., met, hydrological, seisamic);	2.0, 2.1.2, 2.1.3, 2.2.3, 2.3.2(c)	OSC-1
H.5.b	Rad monitors, (e.g., process, area, emergency, effluent, wound and portable monitors and sampling equipment);	H.1.2, 2.2, 3.2, 4.2, 5.0 I 2.2.1 I 2.2.2	EOF-3, 6, 11 RR-22/72, TSC-1
H.5.c	Process monitors (e.g., reactor coolant system pressure and temp, containment pressure and temp, liquid levels, flow rates, status or lineup of equipment components); and	12.2	OSC-1, TSC-8
H.5.d	Fire and combustion products detectors.	l 2.1.1	OSC-1,SO-G-28

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
H.6	Each licensee shall make provision to acquire data from or for emergency access to offsite monitoring and analysis equipment, including:		
H.6.a	Geophysical phenomena monitors (e.g., met, hydrologic, seismic):	2.1.2 2.1.3 2.2.3	OSC-1
H.6.b	Radiological monitors including ratemeters and sampling devices. Dosimetry shall be provided and shall meet, as a minimum, the NRC Rad Assessment Branch Tech Position for the Environmental Rad Monitoring program; and	H 2.2 5.2 5.3 5.6	EOF-3, 11 RR-28
H.6.c	Laboratory facilities, fixed or mobile.	C 4.0	RR-22A/87
H.7	Each organization, where appropriate, shall provide for offsite rad monitoring equipment in the vicinity of the plant.	l 2.3.3 J 2.5	EOF-3
H.8	Each licensee shall provide met instrumentation and procedures which satisfy the criteria in Appendix 2, and provisions to obtain representative current met data from other sources.	1 2.2.3	EOF-6, RR-25
H.9	Each licensee shall provide for an onsite OSC which shall have adequate capacity and supplies, including, for example, respiratory protection, protective clothing, portable lighting, portable radiation monitoring equipment, cameras and communications equipment for personnel present in the OSC.	H 3.0	EOF-11 RR-21/87 OSC-21
H.10	Inspect/inventory/operationally check equipment at least quarterly and after	H 5.0	EPT-24, 25, 26 RP Surv. Tests
	each use. There shall be sufficient reserves of instruments/equipment to replace those which are removed from emergency kits for calibration or repair.		

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
H.11	Identify emergency kits, by general category (i.e., protective equipment,	H 5.0	N/A
	comm equipment, rad monitoring equipment.	 The second se Second second secon	
H.12	Each organization will establish a central point for receipt and analysis of all field monitoring data and	ા લગ ામ 2.1 સંદ્રશ્લેષ્ઠવાનું વિવાસ કરવા ક	EOF-3
	coordination of sample media.		

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NUR	REG Section	NUREG Criteria	RERP Section	Implementing Procedure(s
I.	Accident Asse	ssment		••••••••••••••••••••••••••••••••••••••
	I.1	Identify plant system and effluent	Sec D	OSC-1
		parameter values characteristic of a	84° I 1.0°	
		spectrum of off-normal conditions and	····· 2.0	
		accidents, and shall identify the plant	,	
		parameter values or other information		
	·-	which correspond to the example		
•	-	initiating conditions of Appendix 1.		
	1.2	Onsite capability and resources to	1.0	EOF-6
		provide initial values and continuing	2.0	OSC-1
		assessment throughout the course of		
		an accident shall include post accident		
		sampling capability, radiation and		
		effluent monitors, in-plant iodine		
		instrumentation and containment		
		radiation monitoring.		
	1.3	Each licensee shall establish methods	· · · · ·	· · · · · · · · · · · · · · · · · · ·
		and techniques to be used for	· · · ·	
	2	determining:		
	I.3.a	The source term of releases of	D 1.0	EOF-6
		radioactive material within plant	Table D-1	OSC-2
		systems.		
	I.3.b	The magnitude of the release of	D 2.0	OSC-1
		radioactive materials based on plant	a	EOF-6
	· · · ·	system parameters and effluent		
	11.231.211	monitors.		
	1.4	Each licensee shall establish the	D 2.0	OSC-1
		relationship between effluent monitor	1. P	EOF-6
		readings and onsite and offsite		
		exposures and contamination for		
		various met conditions.		
	l.5	Each licensee shall have the capability	1 2.2.3	EOF-6
		of acquiring and evaluating met		
		information sufficient to meet the		
		criteria of Appendix 2.		

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
1.6	Each licensee shall establish the methodology for determing the release rate/projected doses of the instrumentation used are offscale or inoperable.	I 3.1	EOF-6
1.7	Field monitoring plans.	12.3	EOF-3, RR-22, 72, 87
1.8	Provide methods, equipment and expertise to make rapid assessment of the actual or potential magnitude of any rad hazard through liquid or gaseous release pathways.	13.0 	EOF-6
1.9	Each organization shall have a capability to detect and measure radioiodine concentrations in air in the plume exposure EPZ as low as 10^{-7} µCi/cc under field conditions.	13.0	EOF-3
I.10	Each organization shall establish means for relating the various measured parameters (e.g. contamination levels, water and air activity levels) to dose rates for key isotopes and gross radioactivity measurements.	13.0	EOF-6
1.11	Arrangements to locate and track the plume.	12.3	EOF-3 RR-22/72/87

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
J. Protective Resp	bonse and the second	in the second	
J.1	Each licensee shall establish the means and time required to warn or advise individuals within the owner-controlled area, including:	J 1.3.2 J 1.1	
J.1.a	Employees not having emergency assignments;	J 1.1 J 1.3.2	OSC-2
J.1.b	Visitors;	J 1.1 J 1.3.2	OSC-2 Security Procedures RR-17
J 1.c	Contractor and construction personnel, and	J 1.1 J 1.3.2	OSC-2 RR-17
J 1.d	Other persons who may be in the public access areas or passing through the site or within the owner-controlled area.	J 1.1 J 1.3.2	OSC-2 Security Procedures RR-17
J.2	Make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific rad conditions.	J 1.2 Table J-9	OSC-2
J.3	Each licensee shall provide for radiological monitoring of people evacuated from the site.	J 1.2	RR-87
J.4	Each licensee shall provide for the evacuation of onsite non-essential personnel in the event of a Site Area or	J 1.2	EOF-10, OSC-2 RR-87
가 가지 않는다. 가지 사가 사가 사가 사가 사가 사가 사가 사가 가지 않는다. 아내는 것 같은 것 같은 사람이 있다.	General Emergency and shall provide a decon capability at or near the monitoring point specified in J.3, above.		

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
J.5	Each licensee shall provide for a capability to account for all individuals onsite at the time of the emergency and ascertain the names or missing individuals within 30 minutes of the	J 1.3.2	OSC-2, RR-17 Security Procedures
	start of the emergency and account for all onsite individuals continuously thereafter.	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
J.6	Each licensee shall, for people remaining onsite, make provisions for:)
J.6.a	Individual respiratory protection;	J 1.4.4	EOF-11 RP Manual
J.6.b	Use of protective clothing;	J 1.4.3	EOF-11 RP Manual
J.6.c	Use of KI.	J 1.4.5	EOF-21, RR-87
J.7	Each licensee shall establish a mechanism for recommending PAs to State and locals.	J 2.1.1	EOF-7
J.8	Each licensee's plan shall contain an ETE. These shall be in accordance with Appendix 4.	J 2.3	N/A
J.9	State/local applicability	N/A Table J-9 J-10	N/A
J.10	The organization's plans to implement protective measures for the EPZ shall include:		
J.10.a	Maps showing evacuation routes, evacuation areas, preselected radiological sampling and monitoring points, relocation centers in host areas, and shelter areas;	J 2.3.2 Fig J-1 J-2	OSC-2 ANS Map 10-Mile EPZ Map
J.10.b	Maps showing pop distribution around the Nuclear facility. This shall also be by evacuation areas;	J 2.3.3 Fig J-4 J-7 J-8	N/A

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
J.10.c	Means for notifying all segments of the transient and resident population;	J 2.2	EOF-24
J.10.d	State/local applicability	N/A	N/A
J.10.e	State/local applicability	N/A set 1	N/A
J.10.f	State/local applicability	N/A	N/A
J.10.g	State/local applicability	N/A	N/A
J.10.h	State/local applicability	N/A	N/A
J.10.i	State/local applicability	N/A	N/A
J.10.j	State/local applicability	N/A	N/A
J.10.k	State/local applicability	~ N/A	N/A
J.10.I	State/local applicability	N/A	N/A
J.10.m	The basis for the choice of recommended protective actions from the EPZ during emergency conditions.	J 2.1 Table J-2 J-3 J-4	EOF-7
J.11	State applicability	N/A	N/A
J.12	State/local applicability	N/A	N/A

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NURI	EG Section	NUREG Criteria	RERP Section	Implementing Procedure(s
K. F	Radiological Ex	posure Control		· · · · · · · · · · · · · · · · · · ·
	K.1	Each licensee shall establish onsite exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity PAGs for:		
	K.1.a	Removal of injured persons;	K 1.1	RP Manual
	K.1.b	Undertaking corrective actions;	K 1,1	RP Manual
÷ •	K.1.c	Performing assessment actions;	K1.1	RP Manual
	K.1.d	Providing first aid;	K 1.1	FCSG-15 RP Manual
	K.1.e	Performing personnel decon;	K 1.1	RP Manual
	K.1.f	Providing ambulance service; and	K-1.1	FCSG-15 RP Manual
	K 1.g	Providing medical treatment services.	K.1.1 y	FCSG-15 RP Manual
	K.2	Each licensee shall provide an onsite rad protection program to be implemented during emergencies, including methods to implement exposure guidelines.	K 1.1	EOF-11 RP Manual
	K.3.a	24 hour capability to determine the doses received by emergency personnel involved in any nuclear accident, including volunteers.	K 1.2	RP Manual RR-28
	К.З.Ь	Each organization shall ensure that dosimeters are read at appropriate frequencies.	J 1.4.2 K 1.2	RP Manual
	K.4	State/local applicability	N/A	N/A
	K.5.a	Action levels for determining the need for decon.	K 2.1	RP Manual
	K.5.b	Decon of personnel wounds, supplies, instruments and equipment and for	K 2.0, 3.0	RP Manual

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
K.6	Each licensee shall provide onsite contamination control measure including:		
K.6.a	Area access control;	K 2.0	RP Manual
K.6.b	Drinking water and food supplies;	K 2.2	Chemistry Manual
K.6.c	Criteria for permitting return of areas and items to normal use (see ANSI 12.13).	K 2.4	RP Manual
К.7	Each licensee shall provide the capability for decon of relocated onsite personnel, including provisions for extra clothing and decontaminants suitable for the type of contamination given to radioiodine contamination of the skin.	K 2.1 L 3.2	EOF-10

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•	NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
	L.Medical and Public	Health Support		
	L.1	Each organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurances that persons providing these services are adequately prepared to handle contaminated persons.	L 3.0	FCSG-15
	L.2	Each licensee shall provide for onsite first aid capability.	L 1.0	FCSG-15
	L.3	State applicability		N/A
	L.4	Each organization shall arrange for transportation of rad victims to medical support facilities.	L 2.0	FCSG-15

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)	
M. Recovery and Reentry Planning and post Accident Operations				
M.1	Each organization shall develop plans and procedures for reentry and	M 1.3 2.0	EPIP-EOF-19 EPIP-OSC-2	
	recovery and describe the means by which decisions to relax protective measures are reached.	، جي مريد عبر ميريد مريد <u>و</u> ميريد ميريد		
M.2	Each licensee plan shall contain the position/title, authority and responsibilities of individuals who will fill key positions in the recovery organization.	M 1.2 (1997)	EPIP-EOF-19	
M.3	Each licensee and state plan shall specify the means for informing	M 1.2	EPIP-EOF-19 EPIP-OSC-2	
	members of the response organizations that a recovery operation is to be initiated, and of any changes in the organizational structure that may occur.	 A second sec second second sec		
M.4	Each plan shall establish a method for periodically estimating total population exposure.	13.0	EPIP-EOF-6 EPF-6	

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
N.Exercises and D	ills		
N.1.a	Exercises shall be conducted as set forth in NRC and FEMA rules.	N.	EPT-20
N.1.b	An exercise shall include mobilization of State and local personnel and resourcesshall provide for a critique	N 1.0	EPT-20 EPT-22 EPT-5/6/7/9
·····	by federal and state observers/evaluatorsscenario varied from year to year6:00 PM and Midnite/Midnite and 6:00 AM exercisesunder various weather		
<u> </u>	conditionssome unannounced.		
N.2.a	Communications drills: Comm with State and Locals (monthly)	N 2.1.a	EPT-5/6
	Comm with Federal EROs and states within the IPZ (quarterly)	N 2.1.c	EPT-7
	Comm between the plant, state and local EOCs, and field assessment teams (annually)	N 2.1.d	EPT - 8
N.2.b	Fire Drills	N 2.2	EPT-35, FCSG-10
N.2.c	Medical Emergency Drills	N 2.3	EPT-35, FCSG-15
N.2.d	Rad Monitoring Drills	N 2.4	EPT-12/13
N.2.e	HP Drills		
	Shall be conducted semi-annually which involve response to and analysis of simulated elevated airborne and liquid samples and direct rad measurements. The state drills need not be at each site.	N 2.4	EPT-12
	Analysis of inplant liquid samples with actual elevated rad levels including	N 2.4	EPT-13
er entersalten i det er bete feldet som andere som skort i fri delar i det er som skort i fri delar i det er so	use of the PASS shall be included in HP drills by licensees annually.		· · ·

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
N.3	Each organization shall describe how exercises and drills are to be carried out to allow free play for decision making and to meet the following objectivesThe scenarios shall include, but not be limited to, the following:		
N.3.a	Basic objectives and appropriate evaluation criteria;	N 1.0, 3.0	EPT-20
N.3.b	Dates, time periods, places, and participating organizations;	N 1.0, 3.0	EPT-20
N.3.c	The simulated events;	N 1.0, 3.0	EPT-20
N.3.d	Time schedule of real and simulated initiating events;	N 1.0, 3.0	EPT-20
N.3.e	A narrative summary;	N 1.0, 3.0	EPT-20
N.3.f	A description of arrangements and advance materials for official observers.	N 1.0, 4.0	EPT-20
N.4	An exercise critique.	N 4.0	EPT-20
N.5	Evaluating the comments from observers and participants.	N 4.0	EPT-20

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s
O. Radiological En	nergency Response Training		
0.1	Each organization shall assure training of appropriate individuals.	O 4.0 5.0	EPDM-10
0.1.a	Each facility shall train members of the ERO.	O 5.0	EPDM-10
O.1.b	State/local applicability	O 6.0	N/A
0.2	Training shall include drills.	N 2.0	EPT-35
O.3	Licensee training for First Aid teams to include ARC Multi-Media or equivalent.	O 1.0	EPDM-10
0.4	Each organization shall establish a training program for ERO. Training shall be in the following categories:		
0.4.a	Directors or coordinators of EROs;	O 5.0	EPDM-10
O.4.b	Accident assessment personnel;	O 5.0	EPDM-10
O.4.c	Rad Mon Teams and rad analysis personnel;	O 5.0	EPDM-10
O.4.d	Police, security and fire fighting personnel;	O 6.0	Security Training and Qualification Plan
0.4.e	Repair and damage control/correctional action teams (onsite);	O 5.0	EPDM-10
0.4.f	First aid and rescue personnel;	O 1.0 6.0	EPDM-10 EPT-18
O.4.g	Local support services personnel, including CD/Emergency Services personnel;	O 6.0	EPDM-10 EPT-18
0.4.h	Medical Support Personnel;	L 3.2 O 6.0	EPDM-10 EPT-18
O.4.i	Licensee Headquarters support personnel;	O 4.0	EPDM-10 Crisis Communication Plan
O.4.j	Personnel responsible for transmission of emergency information and instructions.	O 4.0	EPDM-10 OSC-15
O.5	Initial and annual retraining.	O 5.0	EPDM-10 Security Training and Qualification Plan

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NUREG Section	NUREG Criteria	RERP Section	Implementing Procedure(s)
 Responsibility Plans 	for the Planning Effort; Development, Pe	riodic Review and	Distribution of Emergency
P.1	Each organization shall provide for the training of individuals responsible for the planning effort.	P 1.0	Nuclear Policy Manual 1.0
P.2	Each organization shall identify by title the individual with overall planning authority;	P 1.0	Nuclear Policy Manual 1.0
P.3	Each organization will designate an Emergency Planning Coordinator.	P 1.0	Nuclear Policy Manual 1.0
P.4	Each organization shall update its plan and agreements as needed, review and certify it to be current on an annual basis. Changes will take into consideration items from drills and exercises.	P 2.0	EPT-16/22 EPDM-4
P.5	Plans and plan changes shall be forwarded to all organizations and appropriate persons with EP responsibility. Revised pages dated and marked to show changes.	P 2.0	SO-G-7 EPDM-05
P.6	List supporting plans and source.	APPEN B	N/A
P.7	Each plan shall contain an appendix listing procedures required to implement the plan. The listing shall include the sections of the plan to be implemented by each procedure.	APPEN C	N/A
P.8	Each plan shall contain a table of contents. Plans submitted for review should be cross-referenced to these criteria.	APPEN C	N/A
P.9	Independent review of the plans.	P 3.0	EPT-17
-P.10	Quarterly update of plan telephone numbers.	P4.0	EPT-10