PLANT OPERATIONS MANUAL

Volume 10 | 10-S-01-22

Section 01 | Revision: 011

Date: 07/12/2016

REFERENCE USE

EMERGENCY PLAN PROCEDURE

RECOVERY

SAFETY RELATED

Prepared: _____

Reviewed: _____
Technical

Approved: _____
Manager, Emergency Planning

List of Effective Pages:

Pages 1-8

Attachments I

List of TCNs Incorporated:

Revision	TCN
1-011	None

Title: Recovery	No.: 10-S-01-22	Revision: 011	Page: i

RPTS FORM

REQUIRED REVIEW PERFORMED (Check all that apply)	☑ PAD (EN-LI-100)	☐ 50.59 Evaluation (EN-LI-101)
Transmit applicable Review Form as a separate record along with procedure to Document Control.	☐ 72.48 Evaluation (EN-LI-112)	☐ 50.54 Evaluation (EN-NS-210)
	☐ PAD Not Required (EN-LI-100 or 01-S-02-3) ☐ Process Applicability Excluded ☐ Editorial Change ☐ ISI/IST Implementation ☐ TCN Incorporation or Auto Rev. ☐ Other Process-Number: _____ PAD Reviewer: _____ / _____ (for PAD Not Required) Signature/Date	

Cross-Discipline review required?	( ) Yes	(Note affected Departments Below)
	(X) No	
Preparer Initials>>>		

Department Cross-Discipline Reviews Needed	**Signoff** (signed, electronic, telcon)

Does this directive contain Tech Spec Triggers? ( ) YES (X) NO

REQUIREMENTS CROSS-REFERENCE LIST

Requirement Implemented Name	by Directive Paragraph Number	Directive Paragraph Number That Implements Requirement
GGNS Emerg Plan	5.5.S1	6.1.2.a
GGNS Emerg Plan	5.5.S1, S2, & S5	6.3.3.a, b, c & d
GGNS Emerg Plan	5.5.S4	6.3.3.a
GGNS Emerg Plan	6.1.1.S1, S2, & S3	6.1.1.c (note)
GGNS Emerg Plan	9.1.S1	1.2
GGNS Emerg Plan	9.1.S2	6.1.1
GGNS Emerg Plan	9.3.S1	6.2.2
GGNS Emerg Plan	9.3.S5	2.1.1
GGNS Emerg Plan	9.3.S6.a, b & c	6.2.3.S3
GGNS Emerg Plan	9.3.S11	6.3.3.e.(2).(d)
GGNS Emerg Plan	9.3.S13	6.3.2
GGNS Emerg Plan	9.3.S14	6.3.2.c.(1)
GGNS Emerg Plan	9.3.S15, S16	6.3.2.a(1) & (2)
GGNS Emerg Plan	9.3.S17, S18, S19, S20, S21, S22	6.3.2.c
Tech Spec	5.4.1.b	*
10CFR	50.54(w)(4)(ii)	6.3.2.b

* Covered by directive as a whole or by various paragraphs of the directive.

NOTE

The Equipment Database (EDB) Request statement is applicable only to Volume 06 and 07 maintenance directives.

EDB Change Request generated and the backup documentation available for setpoint and/or calibration data only ☐ Yes ☒ N/A EDBCR # _____

Current Revision Statement

Revision 011:

- Add a reference to EPP 12-07, Calculation of Total Population Dose.
- Add responsibility of Site Vice President to section 2 (Reference WT-WTGGN-2016-00181 CA4).

1.0 PURPOSE AND DISCUSSION

1.1 Purpose

To provide general guidance for the recovery phases of an emergency and the formation of a Recovery Organization.

1.2 Discussion

The immediate actions in response to an emergency at GGNS are directed toward limiting the consequences of the incident in a manner that affords the maximum protection to plant personnel and the general public.

2.0 RESPONSIBILITIES

2.1 Emergency Director - Is responsible for:

2.1.1 Determining when the emergency situation is stable and entry into the recovery phase can be initiated.

2.1.2 Establishing a Recovery Organization to effectively place the plant in a safe operating condition.

2.1.3 Ensuring that all emergency response organizations and support organizations are notified of the termination of the emergency and initiation of the Recovery Organization.

2.2 Radiological Assessment Coordinator - Is responsible for developing a near-site environmental monitoring program to assess the offsite consequences of the emergency.

2.3 EOF Manager - Is responsible for constructing a schedule for Recovery Organization and contacting the members

2.4 Recovery Manager - Is responsible for Overall recovery activities and for implementing 10-S-1-23, Reentry, as necessary to support recovery operations.

2.5 Recovery Project Manager - Is responsible for overall engineering, construction, and procurement activities.

2.6 Recovery Project Engineer - Is responsible for engineering activities in support of the recovery operations.

2.7 Recovery Construction Manager - Is responsible for construction or plant modification in support of the recovery operations.

2.8 Recovery Administration Manager - Is responsible for overall administration and logistics in support of the recovery operations.

2.9 Recovery Licensing Manager - Is responsible for overall regulatory coordination and compliance.

2.10 Recovery Radiological Manager - Is responsible for health physics and radwaste activities in support of the recovery operations. Any entry back into EPZ evacuated areas of site personnel is coordinated via the lead government agencies that issued any protective actions. The Recovery Radiological Manager (or Radiological Assessment Coordinator) will coordinate licensee resources return to the site via dialogue and coordination with these lead government agencies.

2.11 Recovery Operations Manager - Is responsible for coordination of plant operations on the support of the recovery operations.

2.12 Recovery Public Relations Manager - Is responsible for coordination of public relations information related to the recovery operations.

2.13 Site Vice President - Responsible for the specific organization and staffing of the recovery organization.

3.0 REFERENCES

3.1 GGNS Emergency Plan

3.2 NUREG 0654

3.3 Fleet ERF Procedure, EN-EP-609, Emergency Operations Facility (EOF) Operation

3.4 Emergency Plan Procedure, 10-S-01-6, Notification of Offsite Agencies and Plant On-Call Emergency Personnel

3.5 Emergency Plan Procedure, 10-S-01-1, Activation of the Emergency Plan

3.6 Emergency Plan Procedure, 10-S-01-23, Reentry

3.7 Administrative Procedure, 01-S-08-2, Exposure and Contamination Control

3.8 Nuclear Management Manual Procedure, EN-EP-301, Emergency Planning Assessment Of Offsite Emergency Response Capability Following A Natural Disaster

3.9 Security Section Procedure 11-S-82-1, Security Contingency Events.

3.10 Security Section Procedure 11-S-11-6, Security Response During Operating Emergencies.

3.11 Emergency Plan Form EPP 12-07, Calculation of Total Population Dose

4.0 ATTACHMENTS

4.1 Attachment I - Long Term Recovery Organization

5.0 DEFINITIONS

5.1 Recovery Actions - Those actions taken after the emergency to restore the plant to pre-emergency conditions

5.2 ED - Emergency Director

5.3 OSC - Operations Support Center

5.4 EOF - Emergency Operations Center

5.5 EPP - Emergency Plan Procedure

5.6 TSC - Technical Support Center

5.7 EPM - Emergency Plant Manager

6.0 DETAILS

6.1 General Requirements

> NOTE
>
> The ED is in charge of the recovery phase. If the EOF is not operational, the EPM is in charge of the Recovery Phase.

6.1.1 Once the corrective and protective actions have established an effective control over the situation, the emergency response actions shift into the recovery phase during which all actions are planned and deliberate.

a. Radiation protection administrative requirements and controls must be implemented, including normal radiation exposure limits, RWPs, ALARA reviews and radiological postings per Reference 3.7

b. Maintenance activities should be performed in accordance with approved plant directives, including such control as Maintenance Action Items, equipment tag-out, and review of the planned work activity by the Shift Manager.

c. Operations activities should be performed in accordance with approved plant directives.

> NOTE
>
> During initial response to an emergency a licensed Senior Reactor Operator may authorize the emergency suspension of some normal quality assurance procedures and administrative controls, license conditions, and Technical Specifications only if no action consistent with normal procedures that can provide adequate or equivalent protection is immediately apparent. For plant recovery, this provision allowed per Reference 3.1, should not be authorized.

6.1.2 Depending on the nature and severity of the emergency, the recovery phase may be:

a. Completed by the Emergency Organization prior to termination of the emergency classification.

b. Performed by a Recovery Organization if the recovery operations will be complicated or will extend over a relatively long period of time.

c. Not necessary

NOTE

This procedure addresses actions to be taken after a major event. Portions of this procedure may be applied to recovery operations for any declared emergency (Unusual Event, Alert, Site Area Emergency, or General Emergency).

Personnel actions and responsibilities are dictated by procedure as each emergency facility is operational.

The Emergency Plant Manager should apply any portion of the recovery phase when the EOF is not operational.

6.2 Initiating Conditions

6.2.1 The transition to a recovery organization can only be effected after the plant conditions are stable and the probability of any adverse effect on the public or damage to the plant has been substantially reduced.

6.2.2 The nature and extent of the emergency determines what recovery operations are required and the extent of the recovery organization that must be formed.

6.2.3 The Emergency Director is to determine when recovery operations of the emergency can be initiated. He provides guidance to the Emergency Plant Manager as appropriate. The following conditions must be met before operations can begin:

a. The plant must be in a controlled and stable condition.

b. The release of radioactive material to the environment must be controlled and must be below Emergency Actions Levels specified in EPP 10-S-01-1, Activation of the Emergency Plan.

c. The radiation levels in all plant areas must be stable or decreasing.

6.3 Recovery

6.3.1 Event Termination

a. The Emergency Director and/or Emergency Plant Manager if the EOF is not operational, determines the nature of the recovery operation based on plant conditions.

b. Obtain a copy of EN-EP-609 Attachment 9.16, Recovery issues Strategy Guide, or similar, to evaluate a decision to terminate the existing emergency condition.

c. If necessary, a Recovery Organization is established. The Recovery Organization is tailored to the specific needs of the recovery operations. If it is determined a Recovery Operation is needed, an organization similar to the one shown in Attachment I is formed.

6.3.1 (Cont.)

d. The Emergency Director discusses existing conditions with the Executive Director of Mississippi Emergency Management Agency (MEMA) or designee located in the MEMA Emergency Operations Center (EOC) and the Secretary - Louisiana Department of Environment Quality (LDEQ) located in the Louisiana State EOC prior to terminating an emergency that reached a Site Area Emergency (SAE) or General Emergency (GE) classification.

e. Offsite organizations must be notified when the onsite emergency operations are terminated. If a Recovery Organization is being established, this is included in the notification.

f. Make the following announcement:

(1) "ATTENTION ALL PERSONNEL; ATTENTION ALL PERSONNEL: SECURE FROM (USUAL EVENT, ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY). RECOVERY ACTIVITIES ARE IN PROGRESS."

(2) If localized problem areas remain (e.g., radiological hazard areas outside normally established CAA), announce their type and location and instruct personnel to stand clear of the area.

(3) Repeat the above announcement(s) at least once.

6.3.2 Initial Objectives

a. The Emergency Director or Recovery Organization performs the following actions as required to place the plant in an acceptable long term condition:

(1) Perform a systematic investigation to determine the equipment that has been damaged

(2) Isolate and tag-out components and systems as required to control or minimize hazards

(3) Install radiation shielding

(4) Construct radiological boundaries and postings

(5) Decontaminate and cleanup

b. The Emergency Director or Recovery Organization performs other actions as necessary to place the reactor in a safe and stable condition.

(1) The NRC shall be notified in writing when the reactor is and can be maintained in a safe and stable condition so as to prevent any significant risk to the public health and safety in accordance with 10CFR50.54(w)(4)(ii).

6.3.2 (cont.)

(2) Within 30 days of the notification above a site clean-up plan shall be submitted to the NRC in accordance with 10CFR50.54(w)(4)(ii)

c. Once the initial objectives are completed and the area affected by the emergency has been defined, the following recovery program elements are implemented:

(1) Perform a detailed investigation of the accident causes and consequences, both to the plant and environment.

(2) Determine and initiate the necessary plant repairs, modification and procedural changes

NOTE
Repair work and approved modifications are carried out as authorized.

(3) Develop and perform (as necessary) test programs to confirm system operability.

(4) Conduct recovery operations with the normal operational radiation exposure limits as specified in Reference 3.7.

(5) Significant releases of radioactive material to the environment during recovery are planned, controlled and evaluated in advance for radiological impact. Appropriate offsite organizations/agencies are informed of the scheduled release and estimated impact.

(6) The Radiological Assessment Coordinator is to develop a near-site environmental monitoring program to assess the offsite consequences of the emergency. This program must be coordinated with the appropriate state and local agencies.

(7) Security Manager/Designee will develop a Security Recovery Plan in accordance with 11-S-82-1 "Security Contingency Events" and 11-S-11-6 "Security Response During Operating Emergencies".

6.3.3 Recovery Organization

a. The ED, with the approval of the Site Vice President (or designee), will develop and implement a recovery organization structure and staffing depending upon the nature of the emergency and the situation which exists after the emergency.

(1) The recovery organization will be manned using available onsite/offsite Emergency Response Organization Personnel and be capable of operating on a 24-hour basis.

6.3.3 (cont.)

(2) The organization should be constructed to support the necessary recovery operations.

(3) Authority and responsibility of individuals who fill key positions in the recovery organization are the same as that held in the respective emergency organizations.

b. The EOF Manager, when directed by the ED, constructs a schedule and contacts Recovery Organization members (Reference 3.4).

c. For Short term recovery operations, consider the following emergency organization changes:

(1) Adjust emergency facility staffing as necessary to support recovery operations.

(2) Implement a 3-shift, 24 hour a day rotation for all emergency organization positions.

d. For long term recovery operations, the following emergency organization may be considered:

(1) Control Room - Designate Shift Manager as Emergency Director; supplement staffing as necessary to support recovery and communications

(2) TSC - Deactivate; use available personnel to supplement staffing of EOF

(3) OSC - Maintain operational status, consider relocating OSC operations to Health Physics Lab

(4) EOF - Maintain operational status: adjust staffing to man the Recovery Organization

e. Upon arrival to the facility, the Recovery Organization objectives are:

(1) Short Term Objectives

(a) Maintain the plant in a stable condition

(b) Establish additional assurance of plant stability by providing additional safety system capability

(c) Maintain control of the release of radioactive material to the environment

(d) Maintain control of personnel exposure

(e) Maintain adequate communications with Federal, State, and Local Agencies

(f) Maintain adequate capabilities for release of factual and timely information to the general public

6.3.3.e (1) (Cont.)

(g) Designate a member of the organization to calculate total population exposure in accordance with Attachment I.

(2) Long Term Objectives

(a) Restore the plant to pre-emergency conditions

(b) Dispose of all waste material generated during the emergency and recovery phases

(c) Evaluate the cause of the emergency, the response to the emergency, and any potential effects of the emergency on future plant operations

(d) The Emergency Director requests assistance from offsite agencies as necessary. The following organizations may be contacted:

(1) other Entergy Fleet Sites

(2) INPO (Emergency Resources Manual)

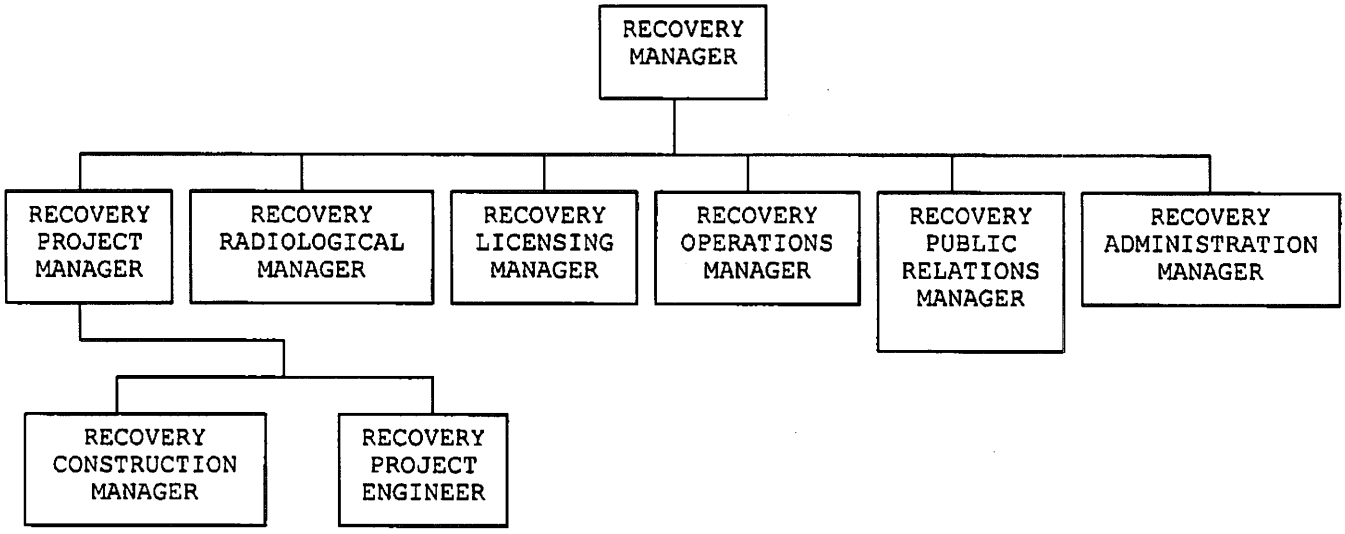
(3) Department of Energy (Radiological Assistance Plan)

(4) Other organizations as listed in the GGNS Emergency Telephone Book

(e) The Site Vice President (or designee) must determine when the condition of the plant is such that the recovery phase may be terminated and the normal operating organization is established.

(1) The appropriate offsite agencies are notified when the recovery phase is terminated.

LONG TERM RECOVERY ORGANIZATION



Procedure/Document Number: 10-S-01-22	Revision: 11
Equipment/Facility/Other: Grand Gulf Nuclear Station	
Title: Recovery	

Part I. Description of Activity Being Reviewed (event or action, or series of actions that have the potential to affect the emergency plan or have the potential to affect the implementation of the emergency plan):

- Add a reference to GGNS EP Form EPP 12-07, *Calculation of Total Population Dose.*
- Add responsibility of Site Vice President to section 2 (Reference WT-WTGGN-2016-00181 CA4).

Part II. Emergency Plan Sections Reviewed (List all emergency plan sections that were reviewed for this activity by number and title. IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE OR EAL OR EAL BASIS CHANGE, ENTER THE SCREENING PROCESS. NO 10 CFR 50.54(q)(2) DOCUMENTATION IS REQUIRED.

5.5 Recovery Organization

9.0 Reentry and Recovery

Part III. Ability to Maintain the Emergency Plan (Answer the following questions related to impact on the ability to maintain the emergency plan):

1. Do any elements of the activity change information contained in the emergency plan (procedure section 3.0[6])?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

2. Do any elements of the activity change an emergency classification Initiating Condition, Emergency Action Level (EAL), associated EAL note or associated EAL basis information or their underlying calculations or assumptions?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

3. Do any elements of the activity change the process or capability for alerting and notifying the public as described in the FEMA-approved Alert and Notification System design report?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

4. Do any elements of the activity change the Evacuation Time Estimate results or documentation?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

5. Do any elements of the activity change the Onshift Staffing Analysis results or documentation?
   YES ☐ NO ☒ **IF YES, enter screening process for that element**

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Part IV. Maintaining the Emergency Plan Conclusion The questions in Part II do not represent the sum total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in Part IV document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion that describes how the conditions as described in the emergency plan are maintained with this activity.
2. Check the box below when the 10 CFR 50.54(q)(2) review completes all actions for all elements of the activity – no 10 CFR 50.54(q)(3) screening or evaluation is required for any element. Otherwise, leave the checkbox blank.

☒ I have completed a review of this activity in accordance with 10 CFR 50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity under 10 CFR 50.54(q)(3).

Add a reference to EPP 12-07, Calculation of Total Population Dose.

This change is an editorial change that adds a reference for the document used to calculate total population dose. The GGNS Emergency Plan section 9.3 (Recovery) states that *Emergency Plan procedures provide methods of periodically estimating total population exposure*. The addition of this reference is consistent with section 9.3 of the GGNS Emergency Plan.

Add responsibility of Site Vice President to section 2.

This addition states that the Site VP is responsible for the specific organization and staffing of the recovery organization. GGNS Emergency Plan section 5.5 (Recovery Organization) states that *the specific organization structure and staffing is the responsibility of the Site Vice President*. This change makes procedure 10-S-01-22 consistent with section 5.5 of the GGNS Emergency Plan.

The ability to maintain the GGNS Emergency Plan is not affected by these changes.

Part V. Signatures:

Preparer Name (Print) Richard Van Den Akker	Preparer Signature	Date: June 21, 2016
(Optional) Reviewer Name (Print)	Reviewer Signature	Date:
Reviewer Name (Print) David Townsend Nuclear EP Project Manager	Reviewer Signature	Date: 6/21/16
Reviewer Name (Print) Jeff Selter Manager, Emergency Planning or designee	Reviewer Signature	Date: 7/11/16