MISSISSIPPI RADIOLOGICAL EMERGENCY PREPAREDNESS PLAN

2020 MREPP

Mississippi Emergency Management Agency, Office of Response and Radiological Emergency Preparedness

October 2020

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Promulgation Statement

Transmitted herewith is the revised Mississippi Radiological Emergency Preparedness Plan (MREPP). This plan supersedes all previous plans and may not be reproduced without prior authorization. It provides a framework for structuring and planning State and Local Civil Defense/Emergency Management offsite emergency response to radiological emergencies.

Inherent in the issuance of this plan, as an integral part of the Mississippi Comprehensive Emergency Management Plan, is recognition of the interrelationship between radiological emergency preparedness planning and other emergency planning. The State's overall emergency planning effort is based on the premise that similarities among the various emergencies, which threaten the public, require maximum standardization of procedures and practices to the extent possible. The State also recognizes the dynamics associated with planning and, consequently, plan upgrading will be accomplished at least annually, and in the ultimate will be a continuing process with the objective of protection of the people from personal injury or loss of life and mitigation of damage or loss of property resulting from radiological emergencies.

By virtue of the authority vested in me, by the Constitution of Mississippi and Title 33, Chapter 15, Mississippi Code of 1972, as amended, I hereby promulgate and issue the MREPP as the official guidance of all concerned. It is in the opinion of the State, the plans/procedures are adequate to protect the health and safety of its citizens by providing reasonable assurance that state, local, and tribal governments can and intend to effect appropriate protective measures offsite in the event of a radiological emergency (44 CFR 350.7(d)).

_____ _____

Tate Reeves Date
Governor
State of Mississippi

_____ _____

Gregory S. Michel Date
Executive Director
Mississippi Emergency Management Agency

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Foreword

The Mississippi Radiological Emergency Preparedness Plan is a supplement to the Mississippi Comprehensive Emergency Management Plan. It has been developed in accordance with NUREG-0654, FEMA REP-1, Revision 2, December 2019, "*Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*," FEMA P-1028, December 2019, "*Radiological Emergency Preparedness Program Manual*," EPA-400/R-17/001, January 2017, *"Protective Action Guides and Planning Guidance for Radiological Incidents,"* and applicable FEMA Guidance Memoranda. This plan, a part of the overall Mississippi Comprehensive Emergency Management Plan, is designed to protect the health, safety, and property of the citizens of Mississippi from all hazards, both natural, man-made, and technological.

This volume addresses the Grand Gulf Nuclear Station (GGNS) in Mississippi and the River Bend Station (RBS) in Louisiana and establishes the planning concepts to be followed in responding to emergency situations in and around these plants. The plan is divided into a Basic Plan and Annexes. The Basic Plan provides a general overview of the response operation, which includes the identification of organizations with a response role, their general responsibilities, and the coordination among those agencies. The Annexes, which are specific in nature, define actions that must be accomplished and assign responsibilities to those agencies that must carry out those actions. Included are related plans that, when taken in their totality, provide a coordinated and predictable response; thus, ensuring the best chance of protecting the citizens of Mississippi.

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Mississippi Radiological Emergency Preparedness Plan

Record of Revisions

Local and state officials review this plan periodically to ensure its adequacy and timeliness. It is the responsibility of MEMA to revise the plan, as necessary, on an annual basis.

The plan has been updated and revised as of the date shown on this Record of Revision sheet. All pages on which revisions have been made appear with the revision reference in the lower right corner.

Revision Number	Date of Revision	Date Entered	Person Entering Revision
1	May 1991		
2	June 1993		
3	August 1995		
4	January 1997		
4a	August 1997		
5	March 1999		
6	July 2001		
7	July 2004		
8	March 2005		
9,10,11,12	January		Julius Green
13	January 2012		David Huttie
14	January 2013		David Huttie
15	September 2014		David Huttie
16	March 2015		David Huttie
17	October 2016		David Huttie
18	October 2018		David Huttie
19	January 2020		Robert Goldsmith
20	October 2020		Preparedness Office

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Mississippi State Department of Health	8	16-23
MSDH Division of Radiological Health	5	91-95
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Mississippi Board of Animal Health	1	25
Mississippi State University - Extension Service	1	26
Mississippi Department of Public Safety	1	27
Mississippi Highway Patrol	2	28-29
Mississippi Department of Transportation	2	29-30
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Mississippi Development Authority/Energy Div	1	33
Mississippi Forestry Commission	1	34
Mississippi Department of Mental Health	1	35
Mississippi Department of Wildlife, Fisheries and Parks	1	36
Mississippi Department of Environmental Quality	1	37
Mississippi State Department of Education	1	38
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Salvation Army	1	40
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Natchez Trace Parkway	1	47
Grand Gulf Nuclear Station	3	48-50
River Bend Nuclear Station	1	51

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Alabama Emergency Management Agency	1	54
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Tennessee Emergency Management Agency	1	56
NRC Region IV	1	57
DOE/Oak Ridge	1	58
EMI Learning Resource Center	1	59
FBI Mississippi	1	60
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NUREG 0654 Cross Reference Index

Cross Reference Index to the criteria for preparation and evaluation of Radiological Emergency Response Plans and Preparedness in support of fixed nuclear facilities. Reference to 10CFR50 requirement, this index satisfies Evaluation Criteria NUREG-0654/FEMA-REP-1, Rev. 2, December 2019

BP means Basic Plan; App. means Appendix; "T-" means Tab; and Page Numbers are in parenthesis.

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1.b. Organizational inter-relationship block diagram	Annex A. App.1 (1-A-1)
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3. Specifies the key individual(s), responsible or statutes that provide the legal basis for: command and control, alert and notification, communications, public information, accident assessment, public health and sanitation, social services, fire and rescue, traffic control, emergency medical services, law enforcement, transportation, protective response and radiological exposure control.	BP 4 (1); BP 8 (8); BP 10 (28); BP 13 (34); Annex A, App. 1 (1-A-1); Annex A, App. 2 (2-A-1); Annex A App.10 (10-A-1); Annex G,3 (G-6)
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1.	Coordinated annual dissemination of information	Annex J, 3 (J-1)
2.	Methods are established for coordinating and disseminating information to the public and media	BP 10, i (32); Annex J, 3, b, 2 (J-3)
3.	Designated news media points of contact and spokesperson	BP 10, i (32); Annex J, 3, b, 2 (J-3); MEMA EA GGNS SOG
3.a.	Establish timely exchange of information between designated spokespersons	BP 10, i (32); Annex J (J-1)
4.	Rumor control	Annex J, 3, c (J-4), Annex J. App. 1 (1-J-1)
5.	Annual program to acquaint news media with Emergency Plans	Annex J III. A. 4 (J-2)
H.	Emergency Facilities and Equipment	
6.	Establish Emergency Operations Center	BP 8, a, 2, c (2); BP 10, b, 2 (28); Annex A, 2, a (A-1); Annex A. App. 4 (4-A-1); Annex A. App. 5 (5-A-1)
9.	Offsite radiological monitoring equipment	Annex G. App. 7 (7-G-1)
11.	Emergency equipment and supplies tested, maintained, and available	Annex D, 2, c, 2 (D-4); Annex G. App. 6, 3 (6-G-3); Annex G. App. 7 (7-G-1)
11.a.	Testing and maintenance responsibility	Annex D, 2, c, 2 (D-4); Annex G. App. 6, 3 (6-G-3); Annex G. App. 7 (7-G-1)
11.b.	Calibration and operations checks	Annex D, 2, c, 2 (D-4)

12.	Emergency kit inventory by general category	Annex G, 2, C, 2, a (G-3); Annex G, App. 3, Tab G (G-3-G-1); Annex G, App. 7 (7-G-1)
13.	Point for receipt and analyzing of all field monitoring data/samples	Annex D, 2, b, 3, e-f (D-2); Annex D. App. 1 (1-D-1)

I. Accident Assessment

2.	Methods for assessing contamination of Drinking water through liquid release Pathways or deposition of airborne materials	Annex D. App. 1 (1-D-1); Annex E. App. 3 (3-D-1)
5.	Organizations responsible field monitoring and necessary resources	Annex D. 2. b. 3 (D-1)
6.	Methods, equipment and expertise for rapid assessments of liquid/gaseous release pathways	BP 8, a, 3 (8); Annex D (D-1)
7.	Capability to detect and measure concentrated radioiodine (10^{-7} uCi/cc under field conditions) in Plume EPZ	BP 10, e (30); BP 10, g (31); Annex D (D-1); Annex D. 2. b. 3 (D-1); Annex O, App. 7 (7-O-1)
8.	Provisions made for estimating integrated dose projected and actual dose rates	BP 10, e (30); BP 10, f (30); Annex D (D-1)
9.	Federal/State resources used for arrangements to locate and track airborne radioactive plume	Annex D, 2, b (D-1); Annex E, 2, f (D-7)
10.	Organizations directly responsible for radiological monitoring, analysis, and dose projections	Annex D (D-1)

J. Protective Response

2.	Provisions for evacuation routes for onsite personnel to offsite locations	Annex F, 2, i-j. (F-3); Annex F. App. 5. 2, a, 2, i (5-F-2)
6.	Basis and methodology are established for the development of PARs for the responsible OROs	Annex E (E-1)

7.	Site-specific protective action strategy or decision-making process	BP 9 d (16); 10, f (30)
8.	Latest Evacuation Time Estimates (ETE)	Annex F. App.4 (4-F-1), See GGNS Emergency Plan, Annex E
8.b.	ETE Analysis	Annex F. App.4 (4-F-1), See GGNS Emergency Plan, Annex E
9.	PARs are provided directly to OROs responsible for making PADs within plume exposure pathway EPZ	BP 9 d (16); 10, f (30)
10.	Map, charts, and other information for the plume exposure pathway	Annex O (O-1)
10.a.	Evacuation routes, areas, reception centers in host areas and shelter areas	Annex O (O-1)
10.b.	Population distribution around the NPP	Annex O. App. 11 (11-O-1)
11.	Capability for implementing PADs	Annex E (E-1)
11.a.	Means for protecting persons whose mobility may be impaired (institutional or other confinement)	Annex F, 2, f (F-3); Annex F. App. 5 Tab C (C-5-F-1)
11.b.	Storage and means of distribution of radioprotective drugs for emergency personnel	Annex G, 2, f (G-6); Annex G, App. 5 (5-G-1); Annex G. App. 5 Tab A (A-5-G-1)
11.c.	Means of relocation (evacuation) Organizations responsible for managing reception centers, arrangements for handling service animals and pets, and provisions for radiological monitoring/ decontamination.	Annex E, 2, b, 2-4 (E-1); Annex F, 2 (F-1); Annex F, 2, K (F-4); Annex F. App. 3 (3-F-1)
11.d.	Reception Centers in host areas	Annex E (E-1), Annex F, 2, d (F-1) Annex F. App. 5 (5-F-1)
11.e.	Control of access to evacuated areas, including organization's responsibilities	Annex F. App. 6 (6-F-1)

11.f.	Identification of and means of dealing with potential impediments	Annex F. App. 6. 3, b (6-F-2)
11.g.	Identification of and means to implement precautionary protective actions	Annex E, 2, b, 2-3 (E-1); Annex F. App. 5. Tab C. 2, a (C-5-F-1); Annex G. App 5. (5-G-1)
12.	Protective measures for Ingestion Pathway	Annex I, 2, a-b (I-1)
13.	Means for registering and monitoring evacuees in reception centers of host areas within initial 12-hour period	Annex F, App. 5 (5-F-1); Annex G, 2, a, 2 (G-1); Annex G. App. 3 (3-G-1)
14.	Plans for the removal or continued exclusion of individuals from restricted area are developed	BP 10, c (30); Annex F (F-1)
14.a.	Process for implementing current Federal guidance for relocation	Annex E, 2, c, 3 (E-4)
14.b.	Means to identify and determine the boundaries of relocation including a buffer zone	Annex E, 2, c, 3 (E-4)
14.c.	Prioritization of relocation	Annex E, 2, c, 3 (E-4)
14.d.	Control of access to and egress from Relocation areas	Annex F. App. 6. 2 (6-F-1)
14.e.	Contamination control during relocation	Annex G. App. 3 (3-G-1)
14.f.	Means for coordinating and providing Assistance during relocation	Annex E, 2, c, 4 (E-8)
K.	Radiological Exposure Control	
2.	Authorization for personnel to receive radiation doses in excess of the occupational dose limits	Annex G, 2, e (G-4)
2.b.	Decision chain for authorizing emergency personnel exposure to exceed EPA PAGs	Annex G, 2, e (G-4)

3. Determine the doses received by emergency workers	Annex G, 2, c (G-2); Annex G. App. 4. (4-G-1)
3.a. Recording of dosimeters and maintenance of dose records for emergency personnel	Annex G, 2, c, 2 (G-3), Annex G. App. 1 (1-G-1)
4. Specify action levels for determining the need for decontamination; means for radiological decontamination for emergency personnel, supplies, instruments and waste disposal	Annex G (G-1)
L. Medical and Public Health Support	
1. Local and backup hospital/medical services	Annex F. App. 10. (10-F-1)
3. List of hospitals	Annex F, App. 10. 2, b, 2 (10-F-1)
4. Transporting victims of radiological accidents to medical support facilities	Annex F, App. 10. 2, b, 1 (10-F-1)
M. Recovery, Reentry, and Post-Accident Operations	
1. General recovery, reentry, and return plans	Annex H (H-1)
1.b. Provisions for reentry into restricted areas	Annex H (H-1)
4. Process for initiating recovery actions to include the provisions to ensure continuity during transfer of responsibility	Annex H, 2, b (H-2)
5. Method for periodically conducting radiological assessments	Annex H (H-1)
6. Responsible for developing and implementing cleanup operations offsite is identified	Annex H (H-1)
7. Developing and modifying sampling plans are established. Provisions for laboratory analysis of samples	Annex H, 2, b, 3, a (H-3); Annex H, App. 2. 2, e (2-H-4)

8.	Method for periodically conducting radiological assessments of public exposure is established	Annex H, 2, c, 3 (H-4)

N. Exercises and Drills

1.	Exercises and drills conducted, observed, and critiqued/evaluated	BP 12. (33), Annex L (L-1)
1.a.	Exercise critique	Annex L 2, a, 2 (L-1); Annex L 2, e, 8, d-e. (L-8)
1.b.	Tracking findings and associated corrective actions identified	Annex L 2, e, 8-10(L-8)
2.	Response organizations' demonstration of the key skills and capabilities necessary to implement the emergency plan	Annex L 2, a, 2 (L-1)
2.a.	Plume exposure pathway exercises are conducted biennially	Annex L 2, a. (L-1); Table L-1 (L-3)
2.b.	Ingestion exposure pathway exercises are conducted at least once every eight years	Annex L 2, a. (L-1); Table L-1 (L-3)
3.	Exercise scenario content is varied	Annex L 2, a. (L-1);
3.a.	Hostile action directed at the NPP site	BP 12, c (33); Table L-1 (L-3)
3.b.	Initial classification of, or rapid escalation To an SAE or GE	Table L-1 (L-3)
3.c.	No release or an unplanned minimal release of radioactive material	Table L-1 (L-3)
3.c.1.	State participation requirements to an unplanned release scenario	Table L-1 (L-3)
3.c.2.	Identification of offsite capabilities that may still need to be evaluated for a no/minimal release exercise	Annex L 2, a, 3 (L-1)
3.d.	Integration of offsite resources with onsite Response	Table L-1 (L-3)

4.	Drill design to demonstrate and maintain key skills and capabilities	BP 12 (33); Annex L, 2, a, 2 (L-1)
4.b.	Medical service drills	BP 12 (33); Table L-1 (L-3)
4.c.	Laboratory drills	BP 12 (33); Table L-1 (L-3)
4.d.	Environmental monitoring drills	Table L-1 (L-3)
4.e.	Ingestion and Post-Plume Drills	Table L-1 (L-3)
4.f.	Communications Drills	BP 12 (33); Table L-1 (L-3)

O. Radiological Emergency Response Training

1.	Ensure training	BP 11 (32); Annex, 2, d (D-5); Annex K, 2, b (K-1); Annex K, App. 1 (1-K-1); Annex K. App.2 (2-K-1);

P. Responsibility for the Planning Effort

1.	Training of responsible individuals for the planning effort	Annex K, 2, b (K-1)
2.	Title individual with overall authority and responsibility for emergency planning	BP 13 (34)
3.	Title individual with overall responsibility for development, maintenance, and coordination of the emergency plans	BP 8, a, 2 (7), BP 8, b, 1, b (15); BP 10 (28)
4.	Annual review and update of plan	BP 13 (34)
5.	Distribution of plan revisions	BP Distribution List (ix); BP 13 (34)
6.	Listing of support plans	Annex N, 4 (N-1)
7.	Appendix list for procedures to implement	Annex N (N-1)
8.	Table of Contents with Cross	Table of Contents (xi); Cross Reference Index (xx)
10.	Periodic review of contact information	Annex N, 3, f (N-1)

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MISSISSIPPI RADIOLOGICAL EMERGENCY PREPAREDNESS PLAN

1. SCOPE. This MREPP establishes the guidance and expectations of how the State of Mississippi responds to a radiological emergency. This document is intended for electronic use; however, the document is formatted for printing.

2. PROPONENT AND EXCEPTION AUTHORITY. The proponent for this MREPP is the Office of Preparedness of the Mississippi Emergency Management Agency. The proponent has the authority to approve exceptions to the program that are consistent with established industry formats and procedures. Information relevant to the distribution of this plan can be obtained by making a request from:

Director, Office of Preparedness
Mississippi Emergency Management Agency
P.O. Box 5644
Pearl, MS 39208
(601) 933-6366
radiological@mema.ms.gov

3. PURPOSE. This plan is developed to provide for an organized response to a radiological emergency in the State of Mississippi that will (1) mitigate the effects that a radiological or hostile action type of emergency could have on the safety and well-being of the citizens of Mississippi, (2) identify and initiate actions in coordination with federal, state, and local agencies necessary for government entities and the residents affected to be prepared to effectively respond when nuclear emergencies arise, (3) provide for timely response to these events and, (4) set forth the procedure that will result in both short term and long term recovery. This plan assigns emergency management functions to state agencies and supporting services that already have, or that can develop, capabilities to carry out these assignments. This plan outlines the concept of operation for the State Emergency Operations Center (SEOC) and the procedures necessary to acquire assistance from outside sources.

4. AUTHORITIES AND REFERENCES.

a. Authorities.

(1) Federal.

(a) NUREG 0654/FEMA REP-1, Rev 2, December 2019, "Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." https://www.nrc.gov/docs/ML1934/ML19347D139.pdf

(b) FEMA P-1028, December 2019 "FEMA: Radiological Emergency Preparedness Program Manual." https://www.fema.gov/media-library-data/1577108409695-4e49a0a56c8c62695dcc301272a1eda7/FEMA_REP_Program_Manual_Dec_2019.pdf

(c) Public Law 96-295, NRC Appropriations Bill. https://www.govinfo.gov/content/pkg/STATUTE-94/pdf/STATUTE-94-Pg780.pdf

(d) 44 CFR Part 350. https://www.law.cornell.edu/cfr/text/44/part-350

(e) 10 CFR Part 50. https://www.nrc.gov/reading-rm/doc-collections/cfr/part050/full-text.html

(f) Public Law 920, Civil Defense Act of 1950, as Amended. https://www.hsdl.org/?view&did=456688

(g) Public Law 920, Civil Defense Act of 1950, as Amended. https://www.hsdl.org/?view&did=456688

(2) State.

(a) Mississippi Emergency Management Law of 1980, Section 33-15, Mississippi Code 1972, Annotated. https://codes.findlaw.com/ms/title-33-military-affairs/

(b) Radiation Protection Law of 1976, Section 45-14, Mississippi Code 1972, Annotated.https://codes.findlaw.com/ms/title-45-public-safety-and-good-order/#!tid=N3073F730ABDD11DBB5DDAC3692B918BC

(c) Executive Order 653, November 16, 1990.

(3) Local. Port Gibson/Claiborne County Joint Ordinance/Resolution, April 3, 1978.

b. References.

(1) FEMA P-1028, January 2016, "Program Manual: Radiological Emergency Preparedness".https://www.fema.gov/media-library-data/1577108409695-4e49a0a56c8c62695dcc301272a1eda7/FEMA_REP_Program_Manual_Dec_2019.pdf

(2) FEMA GM IT-1, "A Guide to Documents Related to the REP Program".

(3) FEMA GM 5, "Agreements Among Governmental Agencies and Private Parties".

(4) FEMA GM 8, "Regional Advisory Committee Coordination with Utilities".

(5) FEMA GM 16, "Standard Regional Reviewing and Reporting Procedures for State and Local REP Plans".

(6) FEMA GM 21, "Acceptance Criteria for Evacuation Plans".

(7) FEMA GM 22, "Record-Keeping Requirements for Public Meetings".

(8) FEMA GM 24, "Radiological Emergency Preparedness for Handicapped Persons".

(9) U.S.EPA 400/R-17/001, "PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents."
https://www.philrutherford.com/Emergency_Response/EPA-400-R-17-001.pdf

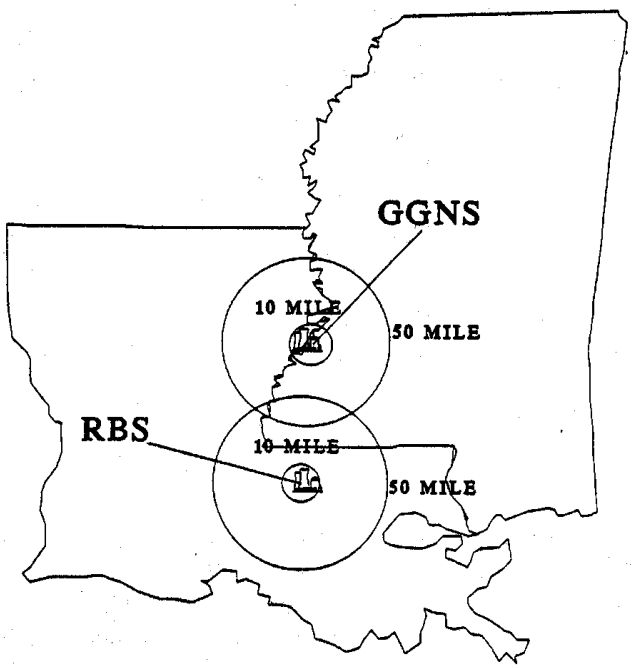
(10) EPA 1987b, "Environmental Protection Agency [EPA]. Radiation Protection Guidance to Federal Agencies for Occupational Exposure. Federal Register", 52, 2822-2834; 1987. https://www.epa.gov/sites/production/files/2015-08/documents/52-fr-2822.pdf

5. DEFINITIONS AND ACRONYMS. See *Annex Q (Definitions and Acronyms)*.

6. SITUATION. There are two commercial nuclear power plants, referred to hereafter in this plan as fixed nuclear facilities (FNF's), which may affect the health, safety, and property of Mississippi citizens; one is located in Mississippi and one in Louisiana. (See Appendix 3)

a. Grand Gulf Nuclear Station (GGNS). Entergy Operations, Inc. has an operating boiling water reactor on the Mississippi River approximately five miles northwest of Port Gibson, Mississippi in Claiborne County.

b. River Bend Station (RBS). Entergy Operations, Inc. has an operating boiling water reactor on the Mississippi River near St. Francisville, Louisiana, approximately 17 miles south of the Wilkinson County Mississippi/Louisiana border.



Fixed Nuclear Facilities Affecting Mississippi

c. Mississippi Counties impacted by an FNF.

County	Grand Gulf Nuclear Station, MS	River Bend Station, LA
Claiborne	Plume Exposure (Risk)	
Warren	Ingestion (Host)	
Hinds	Ingestion (Host)	
Copiah	Ingestion (Host)	
Adams	Ingestion (Host)	Ingestion
Amite	Ingestion	Ingestion
Wilkinson	Ingestion	Ingestion
Franklin	Ingestion	Ingestion
Pike	N/A	Ingestion
Jefferson	Ingestion	
Lincoln	Ingestion	
Simpson	Ingestion	
Rankin	Ingestion	
Madison	Ingestion	
Yazoo	Ingestion	
Sharkey	Ingestion	
Issaquena	Ingestion	

Plume Exposure Pathway: 10-mile Emergency Planning Zone (EPZ)
Ingestion Exposure Pathway: 50-mile EPZ
Risk Area: Population at Risk within 10-mile EPZ
Host Area: Reception Center/Sheltering Operations outside 10-mile EPZ

d. Emergency Facility Activation. The following emergency facilities activate in response to an accident at an FNF:

TIME FRAME	NOTICE OF UNUSUAL EVENT	ALERT/SITE AREA EMERGENCY	GENERAL EMERGENCY
UTILITY	CONTROL ROOM	TECHNICAL SUPPORT CENTER (TSC) EMERGENCY OPERATIONS FACILITY (EOF) OPERATIONS SUPPORT CENTER (OSC)	
LOCAL & STATE		MEDIA CENTER OR JOINT INFO. CENTER COUNTY EMERGENCY OPERATIONS CENTERS (EOC) STATE EMERGENCY OPERATIONS CENTERS (SEOC)	STAGING AREA OR FORWARD COMMAND POST (FCP)
FEDERAL		NRC HEADQUARTERS OPERATIONS CENTER NRC REGION OPERATIONS CENTER	FEDERAL RESPONSE CENTER (FRC) FEDERAL RADIOLOGICAL MONITORING & ASSESMENT CENTER (FRMAC)

e. Radiological Emergency Preparedness Support and Resources.

(1) Federal.

(a) Federal Emergency Management Agency (FEMA). FEMA is the lead Federal agency for the coordination of non-technical Federal support to State/local agencies in implementing protective measures. Support provided by Federal agencies through FEMA is primarily logistical support and may include telecommunications, transportation, housing, and all other types of assistance not classified as technical. The Federal government maintains an in-depth capability to assist State and local governments through the National Response Framework (NRF).

(b) Department of Energy (DOE). DOE) is the lead Federal agency for the coordination of technical Federal support to State/local agencies in the technical assessment of an accident. Support provided by Federal agencies through DOE may include off-site radiological monitoring, evaluation, assessment, and reporting activities. Support provided by DOE may also include laboratory support as required and requested during an accident. Details of federal technical support are identified in the Federal Radiological Monitoring and Assessment Plan.

(c) Technical support augmentation will be requested by MSDH/DRH through DOE. Operational support will be requested by MEMA through FEMA.

(2) State and Local. The Southern Mutual Radiological Assistance Plan provides for manpower support to field sampling and laboratory analysis activities for an accident. Participating States include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas, each State providing its resources as required and requested to support response to an accident occurring in a participatory State. Also, the MS State Fairgrounds and the MS State Coliseum have been identified as the location to support the deployment of Federal Resources.

Various local community services and other public and private resources are available for support to local response to an accident. These resources include hospitals, nursing homes, emergency medical services, transportation companies, schools, and others. The employment of such resources will be coordinated at the county level. During a hostile action type of event against Grand Gulf Nuclear Station, see Appendix 7 of the Basic Plan and the Grand Gulf Integrated Response Plan for immediate critical steps following notification. Also, the Jackson/Evers International Airport has been identified as the arrival point for all Federal resources.

7. ASSUMPTIONS. A radiological accident or hostile action type of event, not necessarily resulting in a radiological release, can occur at GGNS or at RBS that can present an offsite hazard to residents and property. A radiological accident may release quantities of radioactive materials to the environment creating a potential health hazard in areas downwind and/or downstream from the release point. A health hazard threat may require sheltering, monitoring and preparing,

impounding water supplies, and/or area evacuation of people.

State officials recognize their responsibilities concerning the public's safety and well-being. These same governmental officials will assume their responsibilities in the implementation of this emergency preparedness plan.

8. ORGANIZATION AND RESPONSIBILITIES.

a. State.

(1) Governor's Office.

(a) Provides direction and control to ensure the health and safety of the population of the state.

(b) Declares a state of emergency, if needed, to enhance response and recovery.

(c) Requests federal assistance when needed.

(d) Issues executive orders, if needed.

(e) Participates in radiological emergency preparedness exercises and drills.

(f) Implement necessary protective action recommendations and issues evacuation orders, if needed, through the MEMA Executive Director and MSDH/DRH Director.

(2) Mississippi Emergency Management Agency (MEMA).

(a) Provides for the development and maintenance of the Mississippi Radiological Emergency Preparedness Plan (MREPP) and procedures.

(b) Coordinates the activities of state and federal agencies in the implementation of the MREPP in the event of a radiological or hostile action-based emergency.

(c) Provides for the activation and staffing of the State Emergency Operations Center (SEOC).

(d) Serves as the State Warning Point by providing 24-hour communications to receive any FNF radiological or hostile action-based emergency notification and any follow-up notification until the SEOC is activated. Once activated, updates are provided by briefings.

(e) Provides for adequate emergency communications.

(f) Assists local governments in the development and maintenance of REP plans and procedures.

(g) Provides for the collection and dissemination of public information in coordination with local government, the utility, and other agencies.

(h) Provides personnel for the Joint Information Center (JIC).

(i) Provides for developing and maintaining a comprehensive training and exercise program in support of the MREPP.

(j) Develops, conducts, and participates in exercises and drills.

(k) Provides continuity of technical, administrative, and material resources during response operations.

(l) Provides affected counties, State agencies, and fixed nuclear facilities with copies of the MREPP and any subsequent revisions.

(m) Coordinates the allocation and use of resources during an emergency.

(n) Maintains Iodine Sensitivity Questionnaire for MEMA staff functioning as emergency workers. (Annex G, App.5, Tab 5)

(o) Provides a representative to the incident command post with Communications and decision-making authority as necessary.

(3) Mississippi State Department of Health (MSDH).

(a) Division of Radiological Health (DRH).

- Acts as the lead agency for technical response
- Provides an independent accident assessment
- Provides personnel and equipment for the RERT

- Advises state and local officials on the implementation of protective actions based on accident assessment

- Establishes radiological exposure controls for the general population

- Formulates guidelines and maintains permanent records for emergency worker exposure

- Establishes criteria for controlling ingress/egress to/from areas or zones surrounding an accident site

- Develops reentry criteria in coordination with EPA and HHS

- Develops exercises in coordination with MEMA and federal agencies

- Provides radiological laboratory services

- Coordinates decontamination activities

- Provides public information support to MEMA PIO

- Coordinates radiological response activities with GGNS and RBS

- Establishes Potassium Iodide (KI) storage, distribution, and issuance policy

- Maintains annual Iodine Sensitivity Questionnaire for MSDH staff functioning as emergency workers. (Annex G, App.5, Tab 5)

- Provides a representative to the incident command post as necessary

(b) Office of Health Protection (OHP).

- Provides advice to dairy operators, commercial farmers, and water supply operators of potential contamination in the affected EPZ

- Provides for the diversion of food and milk away from retail markets until radioisotopic analyses are performed and evaluated

(c) Division of Emergency Medical Services (EMS).

- Provides medical triage and additional emergency medical services as needed

- Provides medical assistance and/or advice on the care of contaminated and/or irradiated injured personnel

- Contact primary and backup hospitals to determine the availability of beds for use by contaminated, injured, and other potential patients, to include special needs and nursing home patients

(4) Mississippi Department of Transportation (MDOT).

(a) Executes the MDOT Radiological Emergency Response Plan.

(b) Coordinates appropriate activities with State and/or Federal agencies (to include FAA, USCG, USDOI/Natchez Trace).

(c) Maintains annual Iodine Sensitivity Questionnaire for MDOT staff functioning as emergency workers. (Annex G, App.5, Tab 5)

(5) Mississippi Highway Patrol (MHP).

(a) Provides for notification and warning in coordination with the Mississippi Emergency Management Agency and the operators of GGNS and RBS.

(b) Provides traffic and access control at pre-designated traffic control points to limit ingress and control egress from affected areas.

(c) Executes the MHSP Radiological Emergency Plan.

(d) Provides a representative to the incident command post with communication and decision-making authority to relieve LLEA of incident command as required.

(e) Provides accident assessment support.

(f) Provides radiological monitoring support

(g) Provides backup communications.

(h) Maintains annual Iodine Sensitivity Questionnaire for MHSP staff functioning as emergency workers. (Annex G, App.5, Tab 5).

(6) Mississippi Department of Human Services (MDHS).

(a) Acts as the lead agency for reception center activities.

(b) Assists local governments in caring for people evacuated from their homes.

(c) Provides food assistance to those who qualify through the Food Stamp and the Emergency Food Assistance Programs.

(d) Provides support to ARC shelter facility activities, as needed.

(7) Mississippi Department of Agriculture and Commerce (MDAC).

(a) Coordinates the disposition of contaminated crops, lands, and equipment.

(b) Coordinates the monitoring and/or disposition of all meats and meat by-products.

(c) Provides, in coordination with MSDH/DRH, advice on the decontamination of crops, lands, and equipment.

(d) Assists in accident assessment and radiological monitoring.

(e) Maintains annual Iodine Sensitivity Questionnaire for MDAC staff functioning as emergency workers. (Annex G, App.5, Tab 5).

(f) See Annex I for additional Ingestion responsibilities.

(8) Mississippi Board of Animal Health (MBAH).

(a) Coordinates the disposition of contaminated farm animals and household pets.

(b) Assists the MDAC with the acquisition of and distribution of uncontaminated feed for dairy cattle, other farm animals, and household pets.

(c) Coordinates, with the MDEQ and other state agencies, the disposition of contaminated food, milk, and animal feed.

(d) Assists in accident assessment.

(e) Maintains annual Iodine Sensitivity Questionnaire for MBAH staff functioning as

emergency workers. (Annex G, App.5, Tab 5).

(f) Develops directive information about animal issues related to the accident and coordinates with MEMA public information officers regarding the release of such information.

(g) Assists other state agencies in addressing animal decontamination and sheltering issues.

(h) See Annex I for additional Ingestion responsibilities.

(9) Mississippi State University - Extension Service (MSU-ES).

(a) Provides for the distribution of general radiological information to farmers and livestock producers.

(b) Assists in providing emergency public information to farmers and livestock producers.

(c) Provides liaison between County Agricultural Agents and the SEOC.

(d) Assists in accident assessment and radiological monitoring, as needed.

(e) Maintains annual Iodine Sensitivity Questionnaire for MSU-ES staff functioning as emergency workers. (Annex G, App.5, Tab 5).

(f) See Annex I for additional Ingestion responsibilities.

(10) Mississippi Department of Wildlife, Fisheries, and Parks (MDWF&P).

(a) Bureau of Wildlife and Fisheries.

- Assists in the disposition of contaminated wildlife and fish
- Assists in radiological monitoring and accident assessment
- Provides backup communications
- Provides law enforcement assistance, as required

- Provides RERT personnel to perform field activities such as the collection of samples. These activities are under the direction of the MSDH/DRH

- Plans to cease all hunting, fishing, and occupation or areas within and surrounding the EPZ and/or IPZ. Stoppage should include areas outside restricted zone boundaries due to wildlife traveling into and out of the outlying borders of the restricted area

- Maintains annual Iodine Sensitivity Questionnaire for MDWF&P staff functioning as emergency workers. (Annex G, App.5, Tab 5)

- See Annex I for additional Ingestion responsibilities.

(b) Bureau of Parks and Recreation.

- Warns and evacuates persons utilizing Mississippi state parks adjacent to or near GGNS or RBS

- Plans to cease all hunting, fishing, and occupation or areas within and surrounding the EPZ and/or IPZ. Stoppage should include areas outside restricted zone boundaries due to wildlife traveling into and out of the outlying borders of the restricted area

- Maintains annual Iodine Sensitivity Questionnaire for MDWF&P staff functioning as emergency workers. (Annex G, App.5, Tab 5)

(11) Mississippi Department of Environmental Quality (MDEQ).

(a) Assists in radiological monitoring and accident assessment.

(b) Assists in the reclamation of soil and water resources.

(c) Provides seismic information, as needed.

(d) Maintains annual Iodine Sensitivity Questionnaire for MDEQ staff functioning as emergency workers. (Annex G, App.5, Tab 5).

(12) Mississippi Military Department (MMD).

(a) Assists local governments and state agencies as directed by the Governor.

(b) Provides supplemental security needs as deemed appropriate by the Executive Director of MEMA based on the incident.

(c) Maintains annual Iodine Sensitivity Questionnaire for MDEQ staff functioning as emergency workers (Annex G, App.5, Tab 5).

(d) Provides MEMA the status of the 47th Civil Support Team (Annex A, App. 9).

(e) Activates in Alert Status, the 47th Civil Support Team, awaiting mission assistance.

(f) Provide MEMA status of the Georgia National Guard, Joint Task Force 781, CBRNE Emergency Response Force Package (CERFP); discusses the need for JTF 781 with MEMA (Annex A App.8).

(g) Prepares the activation of military transport units and personnel as needed for evacuation and reentry requirements (Annex H).

(13) Mississippi Department of Mental Health (MDMH).

(a) Provides mental health services at shelters.

(b) Provides disaster assistance support.

(c) Provides emergency planning support.

(14) Mississippi Public Utilities Staff (MPUS).

(a) Provides resource management in locating alternate sources of energy.

(b) Provides technical liaison support to SEOC for energy-related emergencies.

(15) Mississippi Forestry Commission (MFC).

(a) Assists in providing emergency public information to farmers.

(b) Assists in accident assessment.

(c) Maintains annual Iodine Sensitivity Questionnaire for MFC staff functioning as emergency workers (Annex G, App.5, Tab 5).

(16) Mississippi Department of Education (MDE).

(a) Directs host county school districts/boards to maintain ongoing communications with local CD/EM agencies to facilitate the use of school buildings during radiological emergencies.

(b) Approves termination of school activities in the affected Host County in the event of an FNF emergency.

(17) State Agency PIO Support. All or any freestanding units of State government will provide emergency public information support when tasked by the Governor or his designee.

b. Local. The following is a general listing of local organizations and responsibilities. A more detailed explanation can be found in the specific supporting local plan. (See Annex N)

(1) County.

(a) County Board of Supervisors.

- Responsible for direction and control of the County response to any radiological emergency

- Declares a state of local emergency when conditions warrant such measures

- Prepares a local resolution to the Governor requesting a declaration of a State of Emergency. This is necessary for the State to assist the affected county.

(b) Local Civil Defense/Emergency Management Agencies (CD/EMA).

- Develops and maintains the Local Radiological Emergency Preparedness Plan

- Schedules and participates in training activities as itemized in Annex K

- Coordinates with MEMA and MSDH/DRH to implement protective action decisions

- Activates the Local Emergency Operations Center (LEOC)

- Directs the County's response, assigns missions and tasks, and directs the course

of action which controls emergency operations

- Coordinates with MEMA PIO on the dissemination of all public information (Risk County only)

- Provides resource continuity within the county

- Maintains county emergency response plans and procedures

- Coordinates with MEMA to activate the Alert and Notification System (this only applies to the Risk County)

- Maintains annual Iodine Sensitivity Questionnaire for county employees/volunteers functioning as emergency workers. (Annex G, App.5, Tab 5)

(c) County Sheriff's Office (SO).

- Maintains the 24-hour County Warning Point, where applicable

- Maintains communications with LEOC

- Assists with evacuation

- Maintains law and order within their jurisdiction

- Provides a representative to the incident command post with communication and decision-making authority to establish and assume incident command as required

- Establishes Traffic Control Points at pre-designated locations to limit ingress and control egress from affected areas within the county (Annex O, App.4 (GGNS) & App.9 (RBS))

(d) County Department of Human Services (DHS).

- Provides direction and control for reception center activities

- Supports the American Red Cross and other county or volunteer organizations staffing the shelter facilities, as needed

- Provides a central location service to reunite separated family members.

(e) County Health Department.

- Assists with any health hazards that might arise and works closely with the MSDH/DRH

- Maintains coordination with the County Department of Human Services

- Ensures that first aid and other medical and dental support are available to the reception center/shelter facilities

- Maintains stockpile of KI for distribution to emergency workers (Risk County Only) (Annex G, App. 5, Tab A)

(f) County Fire Department (FD).

- Maintains fire control services

- Assists in radiological monitoring

- Facilitate requirements for emergency worker decontamination stations.

(g) County Road Maintenance/Department.

- Provides personnel and equipment for traffic and access control at pre-designated points within the county

- Coordinates all response plans with MDOT Radiological Emergency Response Plan.

(h) County Public School District.

- Provides coordination and transportation of public-school students during evacuations in the Risk County

- Arranges for the termination of school activities and prepare for the arrival of evacuees in host counties

- Assists County Department of Human Services in reuniting families that have been separated during an evacuation.

(i) County Extension Service/Agricultural Agent.

- Assists in identifying farmers and livestock producers
- Assists in delivering radiological emergency public information to farmers
- Provides protective action information to farmers and livestock producers
- Identifies sources and coordinates the delivery of uncontaminated feed for livestock.

(2) City.

(a) Mayor. Responsible for the direction and control of the city's response to any radiological emergency.

(b) City Police Department (PD).

- Maintains law and order within their jurisdiction
- Assists with evacuation
- Maintains communication with the LEOC

(c) City Fire Department. Maintains fire control services.

c. Volunteer.

(1) American Red Cross (ARC).

(a) Acts as the lead agency for shelter facility activities.

(b) Provides personnel and supplies to operate the shelter facilities.

(c) Provides LEOC support.

(d) Provides family member location service.

(e) Provides food for evacuees, as needed.

(f) Provides support to MDHS reception center activities, within resource constraints.

(2) Salvation Army. Provides support to the Reception Center and Shelter Facility operations.

(3) Radio Amateur Civil Emergency Service (RACES).

(a) Provides backup communications capability to State and local EOCs.

(b) Provides additional and/or backup communications to Reception Centers and Shelter Facilities.

d. Federal.

(1) United States Nuclear Regulatory Commission (NRC).

(a) Acts as the Cognizant Federal Agency responsible for coordinating the onsite response during any emergency at a fixed nuclear facility.

(b) Provides, in coordination with FEMA, planning guidance and assistance.

(c) Coordinates with FEMA to determine if State and local REP plans are adequate based upon FEMA review and evaluation.

(d) Provides pertinent onsite technical radiological data to the DOE and/or EPA and State and local officials during emergency operations.

(2) United States Department of Energy (DOE).

(a) Coordinates the federal offsite radiological monitoring, assessment, evaluation, and reporting activities during the initial phases of an emergency while maintaining technical liaison with state and local agencies with similar responsibilities.

(b) Maintains a common set of all offsite radiological monitoring data and provides this data and interpretation, including any federal dose projections, to the NRC and the state on an expedited basis to assist in developing other protective measures and reentry recommendations for

the public during the early, intermediate, and late phases of the radiological release.

(c) Assists the NRC in assessing the accident potential and develops technical recommendations on protective actions with other agencies.

(d) Assists the state in preparing reentry recommendations and in recovery planning.

(3) United States Environmental Protection Agency (EPA).

(a) Coordinates intermediate and long-term offsite radiation monitoring activities.

(b) Assists DOE in offsite radiological monitoring.

(4) Federal Emergency Management Agency (FEMA).

(a) Coordinates the offsite (non-technical) support of all federal agencies.

(b) Provides planning guidance and assistance in conjunction with the NRC.

(c) Reviews and approves State and local offsite plans and procedures for dealing with a radiological emergency at a fixed nuclear facility.

(d) Request Federal Radiological Monitoring and Assessment Center (FRMAC) assistance.

(5) United States Department of Health and Human Services (HHS).

(a) Assists with the assessment, preservation, and protection of human health.

(b) Helps ensure the availability of essential human services.

(c) Provides technical and nontechnical assistance in the form of advice, guidance, and resources to federal, state, and local governments.

(d) Develops guidelines for the use of a thyroid-blocking agent through the Food and Drug Administration (FDA).

(e) Assists in developing recommendations on protective measures for food and animal feed.

(6) United States Department of Agriculture (USDA).

(a) Provides radiological advice on food products.

(b) Provides food and food coupon support as required.

(7) United States Department of Transportation (DOT).

(a) Provides civil transportation assistance and support.

(b) Coordinates the federal civil transportation response in support of emergency transportation plans and actions.

(c) Provides traffic control of aircraft operating in the vicinity of fixed nuclear facilities.

(8) United States Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA).

(a) Provides meteorological information and resources.

(b) Ensures that marine fishery products available to the public are not contaminated.

(9) United States Department of the Interior (DOI).

(a) Provides traffic control on the Natchez Trace Parkway.

(b) Directs the evacuation of Rocky Springs Park adjacent to Natchez Trace Parkway.

(10) United States Department of Housing and Urban Development (DHUD).

(a) Provides information on available housing for displaced persons and/or families.

(b) Assists in locating housing for the displaced population, if required.

(11) United States Coast Guard (USCG). Provides traffic control of boats and ships operating on the Mississippi River in the vicinity of GGNS or RBS.

(12) Federal Bureau of Investigation (FBI). During a hostile action event at Grand Gulf, the FBI provides a representative to the incident command post to relieve LLEA/MHP of incident

command and assumes Incident Command for the HAB event as required.

e. Utility (GGNS/RBS).

(1) Coordinates facility emergency operations plan with MEMA and the MSDH/DRH.

(2) Entergy Operations, Inc. (GGNS) and Entergy Operations, Inc. (RBS) maintain and provide to MEMA current facility emergency operating plans. Entergy will provide these to Claiborne County also.

(3) Maintains dedicated communications capabilities with the state and local emergency response agencies.

(4) Provides notification and warning to state and local emergency response offsite organizations.

(5) Provides technical liaison at the State and local EOCs.

(6) Makes protective action recommendations to the State offsite response agencies.

(7) Develops dose projections for offsite exposure to accidental releases of radioactive materials from either GGNS or RBS.

(8) Coordinates with the MSDH/DRH in the assessment of an incident including providing accommodations at the Emergency Operating Facility (EOF).

(9) Participates in exercises and drills.

(10) Coordinates with MEMA in the promotion of public education and information. This includes providing the Joint Information Center (JIC) with accommodations and supplies for state, local, and federal public information staff. Also, provide PIO staff to State JIC.

(11) Provides emergency response training annually for offsite organizations that support the site with emergency services.

(12) Provides and maintains an Alert and Notification System within the plume exposure pathway with activation controls located in the risk county.

(13) Provides a representative to the incident command post with communication and decision-making authority to augment the incident command as required.

9. CONCEPT OF OPERATIONS.

a. General. Under the Governor's direction, the total and combined efforts of state and local governments are utilized to mitigate the effects of offsite radiological hazards or hostile actions resulting from an emergency at either GGNS or RBS.

In the event of an emergency at either site, the facility operator notifies the appropriate offsite officials/agencies per Annex C of this Plan. The State and local governments will take action within the 10 and 50-mile Emergency Planning Zones as appropriate. Mississippi will be responsible for the notification and evacuation of the populace on the East Side of the Mississippi River and Louisiana will be responsible for the notification and evacuation of the populace on the West Side of the river.

b. Emergency Planning Zones. Within the scope of the plan, there are two Emergency Planning Zones (EPZs) that must be addressed. These zones are defined as the areas for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an accident. They have been designed to accommodate the need for actions regarding the potential degree of radiological exposure. The first is the Plume Exposure Pathway and the second is the Ingestion Exposure Pathway.

(1) Plume Exposure Pathway. The Plume Exposure Pathway EPZ is that area within approximately a 10-mile radius of the reactor. Although the radius for an EPZ implies a circular area, the actual shape depends upon the political and geographical boundary characteristics of the zone. The principal radiological exposure from this pathway would be from whole-body exposure, thyroid exposure, deposited radioactive material, and inhalation of radioactive particulates.

The 10-mile Plume Exposure Pathway EPZ for the GGNS is divided between Mississippi and Louisiana, with about two-thirds of the zone in Mississippi. Most of the Mississippi portion is in Claiborne County and an unpopulated area of Warren County. Within the EPZ, there are ten distinct areas called Protective Action Areas (PAAs). Protective Action Recommendations (PARs) for the general public will be made by MEMA in coordination with the MSDH/DRH for the population within these areas. RBS does not impact any part of Mississippi within its 10-mile Plume Exposure Pathway.

(2) Ingestion Exposure Pathway. The Ingestion Exposure Pathway EPZ is that area within a radius of approximately 50 miles from the reactor. The principal radiological exposure from this pathway would be from the ingestion of contaminated water or foods such as milk, fresh vegetables, or fish. The primary responsibility for detailed planning and emergency response for this pathway rests with the MSDH/DRH. The state and local governments will increase their readiness/response efforts according to the emergency classification level declared at the affected

fixed nuclear facility.

The 50-mile Ingestion Exposure Pathway EPZ for the GGNS is divided between Mississippi and Louisiana, with about two-thirds of the zone in Mississippi, impacting 16 counties. About one-fifth of the RBS 50-mile Ingestion Exposure Pathway EPZ extends into Mississippi impacting all of Wilkinson County, and portions of Adams, Amite, Franklin, and Pike Counties.

c. Emergency Classification Levels. A standardized method of classifying an emergency at a fixed nuclear facility has been established by the NRC. These classifications have been adopted by local, state, and federal governments for use in planning and responding to a fixed nuclear facility emergency.

The NRC requires that when an initiating condition for any of the four emergency classes exists, the fixed nuclear facility operator shall provide early and prompt notification (within 15 minutes of classification) to local and state officials. The following emergency classifications are used:

(1) Notification of an Unusual Event (NOUE). Events are in process, which indicates a potential degradation of the safety of the plant or indicate a security threat to facility protection. No releases of radioactive material requiring an offsite response or monitoring are expected.

(2) Alert. Events are in process or have occurred which involve an actual or potential substantial degradation in the level of safety of the plant or a security event that involves probable life-threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act. Any releases of radioactive materials are expected to be limited to small fractions of the EPA Protective Action Guidelines (PAGs) exposure levels.

(3) Site Area Emergency (SAE). Events are in process or have occurred which involve actual or likely major failures of plant functions needed for the protection of the public or security events that result in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevents effective access to the equipment needed for the protection of the public. Any releases are not expected to result in exposure levels that exceed EPA PAG exposure levels beyond the site boundary.

(4) General Emergency (GE). Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with a potential loss of containment integrity or security events that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA PAG exposure levels offsite for more than the immediate site area.

d. Protective Action Guides. The concept of PAGs was introduced to radiological

emergency response planning to assist public health and other governmental authorities in deciding how much of a radiation hazard in the environment constitutes a basis for initiating emergency protective actions. These guides are expressed in units of radiation dose (Rem) and represent initiation levels of planned protective actions should the projected dose exceed the designated level (See Annex E). Should conditions warrant, the MSDH/DRH, in coordination with the utility, may recommend protective action per the EPA PAGs. These guides are listed on following pages:

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Phase	Protective Action Recommendation	PAG, Guideline, or Planning Guidance
Early Phase	Sheltering-in-place or evacuation of the public[b]	**PAG**: 1 to 5 rem (10 to 50 mSv) projected dose over four days[c]
	Supplementary administration of prophylactic drugs – KI[d]	**PAG**: 5 rem (50 mSv) projected child thyroid dose[e] from exposure to radioactive iodine
	Limit emergency worker exposure (total dose incurred over entire response)	**Guideline**: 5 rem (50 mSv)/year (or greater under exceptional circumstances)[f]
Intermediate Phase	Relocation of the public	**PAG**: ≥ 2 rem (20 mSv) projected dose[c] in the first year 0.5 rem (5 mSv)/year projected dose in the second and subsequent years
	Apply simple dose reduction techniques	**Guideline**: < 2 rem (20 mSv) projected dose[c] in the first year
	Food interdiction[g]	**PAG**: 0.5 rem (5 mSv)/year projected whole body dose, or 5 rem (50 mSv)/year to any individual organ or tissue, whichever is limiting
	Drinking water	**PAG:** 100 mrem (1 mSv or 0.1 rem) projected dose, for one year, to the most sensitive populations (e.g., infants, children, pregnant women and nursing women); 500 mrem (5 mSv or 0.5 rem) projected dose, for one year, to the general population
	Limit emergency worker exposure (total dose incurred over entire response)	**Guideline**: 5 rem (50 mSv)/year
	Reentry	**Guideline**: Operational Guidelines[h] (stay times and concentrations) for specific reentry activities (see Section 4.5)
Late Phase	Cleanup[i]	**Planning Guidance**: Brief description of planning process (see Section 5.1)
	Waste Disposal	**Planning Guidance**: Brief description of planning process (see Section 5.2)

[a] This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

[b] Should begin at 1 rem (10 mSv); take whichever action (or combination of actions) that results in the lowest exposure for the majority of the population. Sheltering may begin at lower levels if advantageous.

[c] Projected dose is the sum of the effective dose from external radiation exposure (e.g., groundshine and plume submersion) and the committed effective dose from inhaled radioactive material.

Note: Footnotes continued on next page

Summary Table for PAGs, Guidelines, and Planning Guidance for Radiological Incidents

[d] Provides thyroid protection from radioactive iodines only. See the complete 2001 FDA guidance, "Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies" (FDA 2001). Further information is also available in "KI in Radiation Emergencies – Questions and Answers" (FDA 2002), and "Frequently Asked Questions on Potassium Iodide (KI)." For information on radiological prophylactics and treatment other than KI, refer to http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm063807.htm, https://www.emergency.cdc.gov/radiation, and www.orau.gov/reacts.

[e] Thyroid dose. See Section 1.4.2. The one-year old age group is expected to receive the largest dose to the thyroid from exposure to radioactive iodine. Therefore, it is recommended that the one-year old age group is considered when considering the administration of prophylactic KI.

[f] When radiation control options are not available, or, due to the magnitude of the incident, are not sufficient, doses to emergency workers above 5 rem (50 mSv) may be unavoidable and are generally approved by competent authority. For further discussion see Chapter 3, Section 3.1.2. Each emergency worker should be fully informed of the risks of exposure they may experience and trained, to the extent feasible, on actions to be taken. Each emergency worker should make an informed decision as to how much radiation risk they are willing to accept to save lives.

[g] For more information on food and animal feeds guidance, the complete FDA guidance (FDA 1998) may be found at http://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM094513.pdf.

[h] For extensive technical and practical implementation information please see "Preliminary Report on Operational Guidelines Developed for Use in Emergency Preparedness and Response to a Radiological Dispersal Device Incident" (DOE 2009).

[i] This cleanup process does not rely on and does not affect any authority, including the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9601 et seq. and the National Contingency Plan (NCP), 40 CFR Part 300. This document expresses no view as to the availability of legal authority to implement this process in any particular situation.

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e. Notification.

(1) Notification of Unusual Event. In the event of an incident requiring the utility to declare Notification of Unusual Event, off-site authorities will be notified per Annex C. No further action is required.

(2) Alert.

(a) When the utility is required to declare an Alert, offsite agencies will be notified per Annex C.

(b) MEMA will activate the SEOC in accordance with Annex A.

(c) All State agencies will put their personnel and equipment required for a further response on standby.

(3) Site Area Emergency.

(a) The facility operator will make notification to all agencies per Annex C.

(b) State agencies will complete all actions under Alert as outlined in their respective SOPs.

(c) If it has not already been done, the Governor will declare a State of Emergency.

(4) General Emergency.

(a) The facility operator will notify offsite agencies per Annex C.

(b) State agencies will complete all actions under Alert and Site Area Emergency as outlined in their respective SOPs.

(5) Recovery, Reentry, Return, and Relocation.

(a) The facility operator will notify the offsite agencies that the reactor is stabilized and that they have initiated recovery operations.

(b) Depending upon offsite radiological conditions and acting upon the advice and recommendation of the MEMA and MSDH/DRH Directors, the Governor will direct reentry on either a long or short-term basis.

(c) After a thorough analysis by the MSDH/DRH, DOE, and EPA, a determination will be made whether or not the permanent return may be allowed or if relocation is warranted based upon long term, late phase, projected doses.

10. DIRECTION AND CONTROL.

a. General. The ultimate responsibility for the State's emergency response to a fixed nuclear facility accident belongs to and is directed by the Governor. The MEMA Executive Director serves as the Governor's authorized representative and is responsible for coordinating the emergency response. The MEMA Executive Director makes all routine decisions and advises the Governor on courses of action available for major decisions. During the response, the MEMA Executive Director is responsible for the proper functioning of the SEOC. The Director also acts as a liaison with local, state, and federal agencies. If additional federal assistance is needed, the Governor or the MEMA Executive Director can request through FEMA Region IV, the activation of the National Response Framework (NRF).

b. Facilities.

(1) Local. The Local EOC is the location for county and city agencies to coordinate their response actions among themselves and with state and federal agencies.

(2) State. The State EOC is the location for all key response agencies to coordinate their response actions among themselves and with local and federal agencies responding to the emergency. It is activated in a limited degree during the **Alert** classification, fully activated at any higher classification.

During a hostile action-based incident at Grand Gulf, an on-site response element and command post may be established to coordinate and manage activities at or near the plant. The specific details regarding locations and command and control structure are contained in the Grand Gulf Nuclear Station Integrated Response Plan. The information contained in the document is maintained as For Official Use Only (FOUO) and Law Enforcement Sensitive (LES) and is maintained under separate cover. A copy of the plan is maintained by the MEMA REP Program Manager.

Also, a Memorandum of Understanding between the Mississippi National Guard and Mississippi Emergency Management dated January 2015 has been established to address response to a confirmed hostile action-based event at Grand Gulf Nuclear Station.

(3) Utility.

(a) Control Room. The Control Room is the location within a fixed nuclear facility

from which the reactor and most of its auxiliary systems are normally controlled. During emergency conditions, the control room operators will make initial notifications to offsite agencies.

(b) Operations Support Center (OSC). The OSC provides an area for operations, maintenance, health physics, and chemistry personnel to assemble and be assigned to duties in support of emergency operations.

(c) Technical Support Center (TSC). The TSC provides an area outside the control room that can accommodate management, engineering personnel, and the NRC, acting in support of command and control functions during emergency conditions and the emergency recovery operations.

(d) Emergency Operations Facility (EOF). The EOF provides a location from which evaluation and coordination of all utility activities related to an emergency are carried out. The facility provides information and working space to offsite groups, assesses the impact of the emergency offsite, and provides the necessary offsite support to assist the onsite emergency organization.

(4) Federal.

(a) Federal Response Center (FRC). The FRC is established by FEMA at a location identified by the State to coordinate the federal response to a radiological emergency.

(b) Federal Radiological Monitoring and Assessment Center (FRMAC). The FRMAC is usually located at an airport near the scene of a radiological emergency from which the DOE conducts the Federal radiological monitoring and assessment offsite response. For a GGNS emergency response, this federal facility will be flown to the Jackson/Evers International Airport (JAN) and then set up at the MS State Fairgrounds in Jackson (See Annex D, page 7, section f). The estimated time of response from an initial request from authorized State officials to facility setup should be within six (6) hours.

(c) Joint Information Center (JIC). The JIC, located at the SEOC, is responsible for arranging the timely exchange of information among designated utility, state, local, and federal spokespersons. Equipment and facilities are available to support timely communications and information dissemination concerning plant conditions. Appropriate arrangements have been made at the JIC to deal with rumor control. The JIC is activated at an **Alert** or higher classification (See Annex J). During a HAB type incident, a request for key federal agency representation i.e. FBI Liaison or PIO will be made.

c. Communications. The primary means of communication with GGNS is an Operational

Hot Line (OHL) and an off-site communication system, (INFORM). The INFORM system and OHL are used for initial notification and ongoing communications to the locations listed in Annex B, Appendix 3, Tab A, for the duration of the emergency. The primary means of communication with RBS INFORM and two-way radio. Both GGNS and RBS have the capability of activating the emergency response network by simultaneous notification of each location shown. The communications systems used by the state agencies and other organizations are discussed in detail in Annex B. Primary point-to-point communications will be by telephone.

Control and coordination of the field units will be by existing radio systems from the EOF or SEOC (See Annex B).

d. Alert Notification System (ANS). An alert and notification system is in place per FEMA REP10. In Mississippi, the system consists of 30 fixed omnidirectional sirens located within the 10-mile EPZ in Claiborne County. Businesses, schools, hospitals, and other facilities that contain large numbers of people located within the 10-mile EPZ are supplied with tone activated receivers (tone alerts). These tone alerts supplement the siren system. Two additional receivers are located in a high noise area and are equipped with visual alarms. Claiborne County has 30 tone alert receivers. Claiborne County is responsible for the activation of their respective sirens and tone alert receivers. Back-up Route Alerting supplements these systems as necessary (See Annex C, Appendix 4).

The ANS and procedures provide Mississippi the capability for transmitting both an alert signal and an informational or instructional message, via the Emergency Alert System (EAS), to essentially 100% of the population within 15 minutes of a protective action decision.

In the event of an Initial Notification of **General Emergency**, immediate coordination of siren sounding will be initiated by the MEMA Executive Director, the MSDH/DRH Director, and Claiborne Emergency Management Director. The MEMA PIO will then release an EAS message after Claiborne County activates their sirens. The EAS message will tell residents in the affected areas which protective actions are required. Subsequent decision making will occur as in other emergency conditions (See Annex C).

e. Radiological Assessment. If an accident occurs at the GGNS or RBS, the MSDH/DRH will activate the Field Monitoring Teams (FMT). The FMTs will perform radiological monitoring, analyses, and assessment (See Annex D).

f. Protective Action. In the event of an accident at GGNS or RBS with projected offsite effects exceeding the EPA PAGs, the State of Mississippi has established protective response measures for the general public, which include sheltering, monitoring and preparing, respiratory protection, access control, and evacuation. In the event of a declaration of any emergency

classification, the licensee will make a recommendation to the state and county on what protective actions should be taken. The MSDH/DRH conducts an independent assessment and makes recommendations to the MEMA Executive Director regarding protective action to be taken during the early, intermediate, and late radiological incident phases (See Annex E) and this is communicated as suggested Protective Action Decisions to the OROs.

g. Radiological Exposure Control. The MSDH is the lead agency for radiological exposure control. The MSDH is the decision-making organization for the protection of public health and safety during a radiological emergency. During immediate action conditions and on a day-to-day basis, DRH acts for the MSDH and will advise MEMA of recommended protective response and radiological exposure control measures if there is a potential for off-site consequences.

State emergency workers will be authorized to exceed EPA PAGs for the general population by the State Health Officer/Mississippi State Department of Health (SHO/MSDH). Monitoring and decontamination of emergency workers will be conducted as necessary (See Annex G, Appendix 4).

Reception/host counties are responsible for providing radiological monitoring and decontamination to the public, if necessary (See Annex G, Appendix 3).

Potassium Iodide (KI) will be available for use by emergency workers operating in the thyroid risk area during an emergency. It will be administered at the order of the SHO (See Annex G).

h. Recovery, Reentry, Return and Relocation. If an evacuation of all or any part of the 10-mile EPZ is ordered, there are occasions when members of the general public may have to reenter for brief periods. The care and feeding of livestock is an example of such an occasion. Re-entry will be controlled by law enforcement officers at the access control points. Local government will make provisions for control of reentry to ensure that radiological exposure is minimized, and the evacuated area remains secure (See Annex H).

A permanent return will be authorized by the MSDH/DRH after it has been determined there is no longer an over-riding radiation hazard.

From the outset of a radiological accident, the licensee's operators will be taking action to bring the plant under control and restore it to normal operating conditions or too cold shutdown. This is the onsite recovery process. The offsite recovery process is both a short-term and a long-term process. Short-term operations seek to restore vital community services and to provide for the basic needs of the public. Long-term recovery focuses on restoring the community to its normal state of affairs. Should the area be contaminated to the degree that radiation exposure would exceed 2 REM/year (TEDE), a permanent return may not be allowed. In this case, relocation of

the residents of that area will be initiated (see Annex H).

i. Public Information. Coordination of the public information function during a fixed nuclear facility radiological emergency is handled by MEMA through its Public Information Officer (PIO). MEMA will enlist the services of PIO's from other State agencies to support this function.

The major responsibility of the public information staff is to work with authorities and the media to provide accurate and timely information and instructions to the public. This includes coordinating with the State as to what statements should be furnished to the media, what actions are to be taken by the involved public, what is happening, what is expected to happen, and advising the public of any recommended protective actions.

During a radiological emergency, public information activities are coordinated from the Joint Information Center (JIC) with representatives from the affected county, state, utility, and federal responding agencies. During a hostile action-based event at Grand Gulf Nuclear Station, the information will be coordinated through federal, state, and/or local law enforcement authorities.

11. TRAINING.

a. General. Radiological emergency preparedness training is designed to develop and maintain the knowledge and skills for emergency response personnel to respond effectively to an emergency. The training program includes initial training, procedural training, drills, and continuing or refresher training. The training program is conducted within the policies of MEMA and is an ongoing function (See Annex K).

b. Initial Training. Initial Training includes instruction on:

(1) Fundamentals of Radiation.

(2) Overview of Emergency Plan and Annex Procedures.

(3) Emergency Facilities and Equipment.

(4) Communications Systems.

(5) Specialty Training.

c. Procedural Training. Procedural training is specific to the responsibilities of the emergency response personnel during a radiological emergency and includes:

(1) Use of procedures and checklists

(2) Position-specific training

(3) Radiological Exposure control (dosimetry/KI)

d. Continuing Training. Continuing Training is designed to maintain and improve emergency response task-related knowledge and skills and includes the following:

(1) A review of the items listed in initial and procedural training

(2) Changes in policies, plans and/or procedures

(3) A review of past drill and exercise performance

12. DRILLS AND EXERCISES.

a. General. Radiological and hostile action emergency response drills and exercises are designed and conducted to test the adequacy of coordination and content of radiological emergency preparedness plans and procedures. Drills and exercises include selected mobilization of state and local personnel and resources adequate to verify the offsite response capabilities to an accident (See Annex L).

b. Drills. A drill is a supervised instruction period aimed at testing, developing, and improving skills. Drills will be supervised by a qualified instructor who will provide immediate feedback on performance. Drills include:

(1) Communication Drills.

(2) Medical Emergency Drills.

(3) Health Physics Drills.

(4) Site Training Drills.

(5) Monitoring and Decontamination Drills.

(6) Remedial Drills (These are conducted, as necessary, to correct a planning element that has not been fully demonstrated during an exercise.).

(7) Hostile Action Based Drills.

c. Exercises. An exercise is an event that tests/evaluate the integrated capability of the emergency response organization, as well as a major portion of the basic elements of the emergency preparedness plan. The State is responsible for FEMA for exercise activities offsite and utility is responsible to the NRC for onsite exercise activities. The State will test all major elements of this plan during a federally evaluated biennial exercise within eight years. Biennial offsite exercises will be combined with the utility's annual on-site exercise. The utility is required to have at least one exercise or drill every eight years to be conducted off-hours, between the hours of 1800 and 0400; it is optional for the OROs to participate in this. Exercise scenarios will be conducted per guidance from the FEMA REP Manual, 2016. A hostile action-based (HAB) exercise with full participation will be conducted at least once every eight-year cycle. Participants will be sufficient for carrying out the security measures required by the exercise scenario.

13. PLAN DEVELOPMENT AND MAINTENANCE. The Mississippi Emergency Management Agency is responsible for the development and maintenance of the Mississippi Radiological Emergency Preparedness Plan (MREPP). The Executive Director of MEMA has the overall authority and responsibility for radiological emergency response planning. The MEMA REP Program Director has the responsibility for the development and updating of the radiological emergency plan and coordination of this plan with the other response organizations. Each agency/organization with responsibilities under this plan is responsible for ensuring that their plan and procedures are reviewed and updated annually. All changes/updates are to be submitted to MEMA for review and comment. MEMA coordinates all revision efforts and ensures that an annual review of the MREPP and individual MREPP support plans are conducted by all involved agencies. For the MREPP to be effective, its s must be known and understood by those who are responsible for its implementation.

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Annex A (Direction and Control)

1. **PURPOSE**. To provide direction, control, and coordination of state response to radiological emergencies at fixed nuclear facilities.

2. CONCEPT OF OPERATIONS.

a. General. The Governor, assisted by the Mississippi Emergency Management Agency (MEMA) Director and staff and the heads/coordinators of state agencies, will exercise direction and control from the State Emergency Operations Center (SEOC) or his normal office location. The SEOC will be partially staffed during an **Alert** or higher emergency classification.

The SEOC is located at #1 MEMA Dr., Pearl, Mississippi 39288. This facility contains the primary working space, the necessary communications to coordinate emergency operations throughout the state, and an alternate power source. The Rankin County Emergency Operations Center will serve as the backup EOC for Claiborne County Emergency Management Agency and its key elected officials. Support EOCs will be established, as required, in the counties with a support role in this plan. For Grand Gulf Nuclear Station (GGNS), this includes Claiborne County in the 10-mile EPZ and Copiah, Hinds, Adams, and Warren Counties as host counties for the plan. For River Bend Station (RBS), support EOCs will be established as needed in affected counties. Field or mobile command posts will be established as required by the situation.

b. SEOC Staff Organization. The staff of the SEOC is comprised of the MEMA staff augmented by personnel from other state agencies. These personnel may perform their emergency functions in their normal office locations or the SEOC, depending on the activation level. These functions are listed in the State Comprehensive Emergency Management Plan (CEMP). The SEOC has the resources to ensure a continuity of operations for 24/7/365 operations and MEMA maintains an updated SEOC Manning Roster for 12-hour shifts on the agency public drive. Each supporting agency/organization with staffing requirements in the SEOC is required to maintain the same level of readiness. At the beginning of each incoming shift, the Operations Chief initiates a Shift Change Brief to ensure adequate and smooth transitioning of personnel.

The Port Gibson/Claiborne County EOC will be staffed by state agencies as required by the situation. Staffing of field or expedient EOCs (mobile command post) will be determined by the situation and response requirements.

c. Responsibilities. The Governor is responsible for declaring a State of Emergency upon recommendation by the MEMA Director but no later than Site Area Emergency.

The Governor, through the MEMA Director, will request any federal assistance required by the

situation.

Acting upon the recommendations of the Mississippi State Department of Health, Division of Radiological Health (MSDH/DRH) Director, and the MEMA Director, the Governor will/may order an evacuation, should one be warranted, based upon projected or actual offsite radiation levels or plant conditions. Reentry will be authorized by the Governor, again acting on the recommendations of MSDH/DRH and MEMA.

The MEMA staff is responsible for maintaining the SEOC in a state of constant readiness. State agencies represented in the SEOC during a radiological emergency are responsible for maintaining their agency's particular maps, supplies, and equipment required to fulfill their duties. MEMA is also responsible for the maintenance of its emergency generator and all other facility maintenance requirements.

d. Local Government Role. Local governments have the primary role in preventing unnecessary hazards to the general public from an emergency at a fixed nuclear facility. The risk and host counties affected by an emergency are responsible for initial radiological emergency response operations. These counties will coordinate and direct such actions through their emergency management organizations and other county emergency response agencies. The counties will continue to coordinate overall emergency response activities and operations until increased state assistance is deemed necessary.

It is anticipated that for Notification of Unusual Event and Alert emergency classifications, the local governments will maintain primary responsibility for coordinating the emergency response. Direction and control of the response will emanate from the county emergency operations centers. The role of state government at these emergency classifications will be to provide assistance in the notification and to coordinate state agency support of the emergency response operations through the Mississippi Emergency Management Agency.

e. State Government Role. The role of state government in response to a fixed nuclear facility emergency is to support local government operations unless the scope of the emergency warrants increased state action. The state government support is coordinated by MEMA from the SEOC. For lower emergency classifications, this support will consist of issuing notification, 24-hour staffing by duty officer (communications at a minimum), and coordination of the emergency response. The MSDH/DRH will provide radiological monitoring and assessment support to the State and local governments for all levels of an emergency.

Increased state actions may be warranted for emergencies that involve multi-jurisdictional hazards when local governments believe the emergency is beyond the capabilities of local resources or when the Governor determines there is an overriding concern for the safety of the public. It is

anticipated that these conditions are most likely to occur when a Site Area Emergency or General Emergency is declared. For these situations, the Governor can designate the primary responsibility for an emergency response to the State by issuing a State of Emergency Proclamation under the provisions of Sections 33-15-11 and 33-15-3 (a), Mississippi Code of 1972. An example of this Proclamation is shown in Appendix 7. The issuance of the Proclamation will be coordinated with the risk county. Upon issuance of a Proclamation, the risk county will continue to coordinate the emergency response operations of the local agencies.

Should the State assume primary responsibility for coordination of the emergency response, overall direction, and control of the emergency response will emanate from the SEOC. Implementation of emergency response directives will continue to be coordinated by State and county personnel through their respective EOCs.

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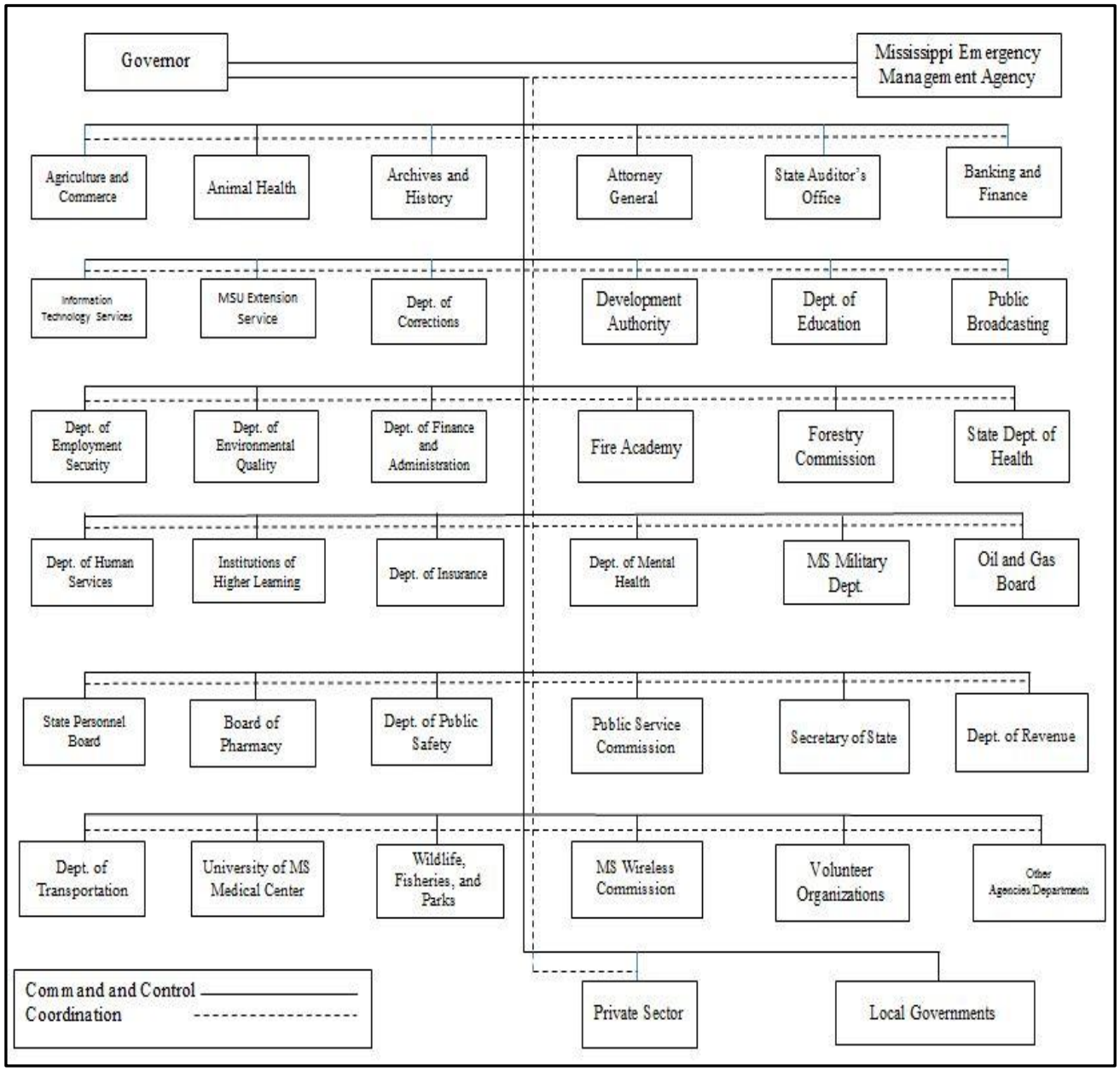
Annex A (Direction and Control)
Appendix 1 (State Command/Control/Coordination Chart)



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Annex A (Direction and Control)
Appendix 2 (State Functional Matrix)

Planning	P	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	P	P
Direction & Control	P	S									S							S		S	P
Alert & Notification	S			S														P			S
Communications	P	S	S	S		S			S		S							S	S	S	S
Public Information	P	S	S	S		S	S	S							S	S	S	S			P
Accident Assessment	S	P				S	S	S	S				S	S				S			
Protective Response	P	P	S	S														S			S
Exposure Control	S	P																			
Decontamination		P				S	S	S	S		S									S	S
Monitoring		P	S	S					S	S	S							S		S	S
Access/Egress Control		S	S	P					S		S								S		S
Evacuation	S	S	S	S	S														S		P
Reception	S				P											S	S			P	
Shelter	S				S											S	P			P	
Reentry/Recovery	S	P	S	S	S	S	S	S	S	S				S		S	S				
Food & Water Purity		P				S	S	S	S	S	S										
Laboratory Services		P	S							S											
Field Sampling	S	P							S	S								S			
Health/Emergency Medical		P									S	S				S	S			S	S
Training/Exercises	P	S	S	S	S	S	S	S	S	S	S	S	S		S	S	S	S	S	S	S
Transportation	S		P								S									S	P
Fire											S			P						P	
Search & Rescue											P									P	
Law Enforcement				P					S		S								S	S	S
Traffic Control			S	P					S		S								S	S	S
Accident Classification																		P			

	MEMA	MSDH	MDOT	MHP	MDHS	MDAC	MBAH	MSU-ES	DWFP	DEQ	MMD	DMH	MDA/ED	MFC	MSDE	SALVATION ARMY	ARC	FNF	NATCHEZ TRACE	HOST COUNTIES	RISK COUNTY
PRIMARY (P)																					
SUPPORT (S)																					

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Annex A (Direction and Control)
Appendix 3 (Activation by Emergency Classification Level)

ECL	NOTIFIED/ON STANDBY	ACTIVATED
NOTIFICATION OF UNUSUAL EVENT (NOUE)	**GGNS/RBS:** Initial Response Group Risk County EOC	
ALERT	**GGNS:** Host County EOCs **RBS:** Initial Response Group First Response Group	**GGNS:** JIC SEOC (Partial) 1 Initial Response Group 2 First Response Group Risk County EOC Copiah County EOC
SITE AREA EMERGENCY (SAE)	**GGNS:** Ingestion Pathway Counties **RBS:** First Response Group Ingestion Pathway Counties	**GGNS:** SEOC (Full) Risk County EOC Host County EOCs All State Agencies **RBS:** SEOC (Partially) Initial Response Group
GENERAL EMERGENCY (GE)	**GGNS:** Ingestion Pathway Counties **RBS:** Ingestion Pathway Counties	**GGNS:** SEOC Risk County EOC Host County EOCs **RBS:** SEOC

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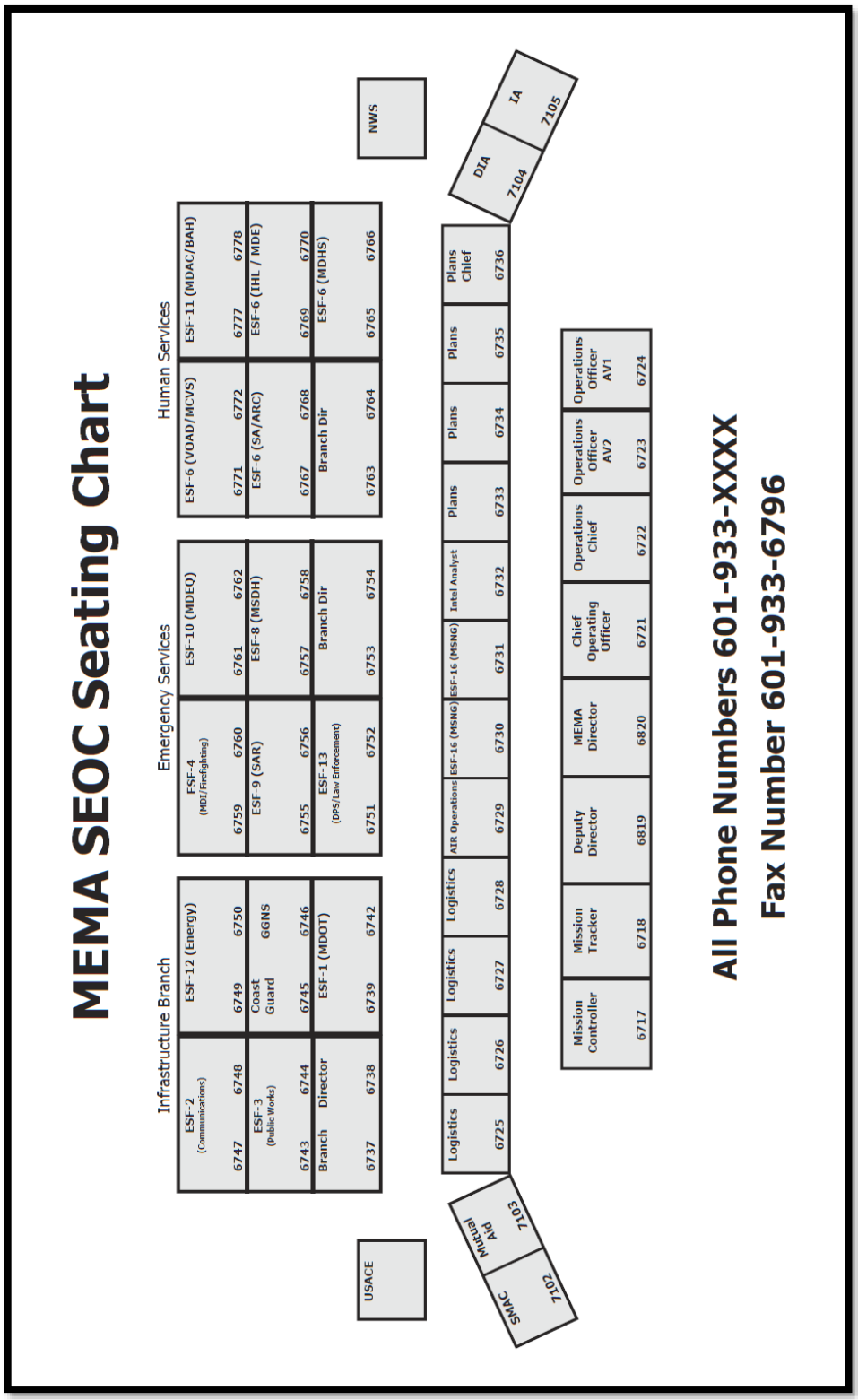
Annex A (Direction and Control)
Appendix 4 (SEOC Operations Room FNF Emergency Layout)



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Annex A (Direction and Control)
Appendix 5 (MEMA Standard Operating Procedures for FNF Emergency)

1. ACTIVATING THE SEOC. The SEOC will be activated for an incident at a fixed nuclear facility if the Emergency Classification Level (ECL) is **ALERT** or higher. MEMA Operations, as dictated by the emergency conditions, will post MEMA staffing assignments.

2. ALERTING PROCEDURES.

a. Normal Duty Hours (0800-1700 Monday through Friday).

(1) The Communication Bureau receives emergency information and notifies the appropriate MEMA staff.

(2) The Operations Bureau Chief or designee will notify the MEMA Director and MEMA staff and cause the appropriate State and Federal agencies to be notified as per Notification SOPs (See Annex C).

(3) The MEMA Executive Staff will notify the Governor.

b. Off-Duty Hours (1700-0800 Monday through Friday, 0800-0800 Saturday, Sunday and holidays). The MEMA State Warning Point receives the notice and notifies key MEMA Staff & supporting agencies.

c. Staff Briefing. After an ALERT and when sufficient members of the SEOC staff have reported, the Office of Response will take the following actions:

(1) Brief staff on the situation.

(2) Identify working locations.

(3) Assign tasks that are to be accomplished on an immediate PRIORITY BASIS.

(4) Advise FEMA that the SEOC has been activated.

3. SECURITY AND IDENTIFICATION.

a. Security.

(1) Security will be implemented per MEMA Security SOG. If necessary, security can be augmented by either MHP or MMD personnel.

(2) MEMA Physical Security Officer will coordinate security.

b. Identification.

(1) Issued personal identification cards will be used for access control for the following:

(a) MEMA staff.

(b) Entergy staff (issued by the Utility).

(c) State agency personnel assigned to the SEOC.

(d) Support personnel from private and volunteer organizations and agencies assigned to the SEOC.

(2) SEOC identification cards specific to the FNF event will be prepared and maintained in the SEOC. These identification cards will be issued and recovered, as necessary, by security personnel. They will be displayed in conjunction with personal identification cards at all times when working in the SEOC.

(3) Identification cards for visitors and the media will be issued as required by security personnel. Visitors and media personnel will not be given access to areas where emergency operations are being conducted unless escorted by a SEOC staff member. VISITOR AND MEDIA IDENTIFICATION CARDS WILL BE SURRENDERED WHEN LEAVING THE SEOC.

c. Temperature Screening/Additional Requirements.

(1) All personnel entering any MEMA facility are required to adhere to all temperature screening procedures before being issued identification badges and/or admitted into the facility.

(2) Personnel that fail the temperature screening will be required to exit the building, social distancing, masks worn, and contact their immediate supervisor for further direction. Personnel at a minimum will not be allowed in the facility for failure to pass the temperature screening.

(3) Personnel not feeling well (fever, cough, difficulty breathing, fatigue, muscle or body aches, headache, the new loss of smell or taste, sore throat, congestion or running nose, nausea or vomiting, and/or diarrhea) must exit the building immediately social distancing, masks are worn,

and contact their immediate supervisor for further direction. Personnel at a minimum will not be allowed in the facility and must exit immediately if have a fever of 100.4º or higher.

(4) The social distancing of six (6) feet or more is required on the MEMA Facility grounds. When this cannot be met, facial masks are to be worn.

(5) Facial masks are required on the MEMA Facility grounds that cover the nose and mouth. While seated and eating, personnel can remove their mask. Personnel will wear a mask while moving through meal serving lines.

4. NOTIFICATION PROCEDURES FOR NORMAL AND AFTER HOURS SEOC ACTIVATION (Refer to the MEMA SEOC and Communications Standard Operating Procedures).

For specific details on all MEMA Response processes, see *Annex L (Response Framework)* to *MEMA Policies and Procedures Manual*.

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Annex A (Direction and Control)
Appendix 6 (County EOC Locations)

ADAMS COUNTY (Ingestion Pathway - GGNS and RBS)

Natchez/Adams County Civil Defense
Director: Robert Bradford
EOC Address: 201 S. Wall Street, Natchez, MS
Phone: (601) 442-7021

AMITE COUNTY (Ingestion Pathway - GGNS and RBS)

Amite County Emergency Management Agency
Director: Grant McCurley
EOC Address: 243 South Broad St., Liberty, MS 39645
Phone: (601) 657-1011

CLAIBORNE COUNTY (Plume Exposure/Ingestion Pathways - GGNS)

Port Gibson/Claiborne County Emergency Management Agency
Director: Marvin Ratliff
EOC Address: 2033 Hwy. 18, Port Gibson, MS
Phone: (601) 437-3996

COPIAH COUNTY (Ingestion Pathway - GGNS)

Copiah County Emergency Management Agency
Director: Randle Drane
EOC Address: 122 S. Lowe Street, Hazlehurst, MS
Phone: (601) 894-1658

FRANKLIN COUNTY (Ingestion Pathway - GGNS and RBS)

Franklin County Emergency Management Agency
Director: Mark Thornton
EOC Address: 86 Walnut St. South, Meadville, MS
Phone: (601) 384-2287

HINDS COUNTY (Ingestion Pathway - GGNS)

Hinds County Department of Emergency Management
Director: TBD
EOC Address: 300 N. State Street, Jackson, MS
Phone: (601) 960-1476

ISSAQUENA COUNTY (Ingestion Pathway - GGNS)

Issaquena County Emergency Management Agency
Director: Larry Short
Address: 129 Court St., Mayersville, MS
Phone: (662) 873-2761

JEFFERSON COUNTY (Ingestion Pathway - GGNS)

Jefferson County Civil Defense
Director: Brenda Hammitte
EOC Address: 307 Main Street, Fayette, MS
Phone: (601) 786-8422

LINCOLN COUNTY (Ingestion Pathway - GGNS)

Lincoln-Brookhaven County Civil Defense
Director: Clifford Galey
EOC Address: 212 East Chippewa Street, Brookhaven, MS
Phone: (601) 833-8561

MADISON COUNTY (Ingestion Pathway - GGNS)

Madison County Emergency Management Agency
Director: Albert Jones, III
EOC Address: 152 Watford Parkway, Canton, MS
Phone: (601) 859-4188

PIKE COUNTY (Ingestion Pathway - RBS)

Pike County Civil Defense
Director: Richard Coghlan
EOC Address: 310 Canal Street, McComb, MS
Phone: (601) 684-3564

RANKIN COUNTY (Ingestion Pathway - GGNS)

Rankin County Emergency Management Agency
Director: Mike Word
EOC Address: 601 Marquette Road, Brandon, MS
Phone: (601) 825-1499

SHARKEY COUNTY (Ingestion Pathway - GGNS)

Sharkey County Emergency Management Agency
Director: Frank Eason
EOC Address: 120 Locust Street, Rolling Fork, MS
Phone: (662) 873-1685

SIMPSON COUNTY (Ingestion Pathway - GGNS)

Simpson County Emergency Management Agency
Director: John Kilpatrick
EOC Address: 1752 Simpson Hwy. 149, Mendenhall, MS 39114
Phone: (601) 847-3434

WARREN COUNTY (Ingestion Pathway - GGNS)

Warren-Vicksburg County Emergency Management Agency
Director: John Elfer
EOC Address: 1009 Cherry Street, Vicksburg, MS
Phone: (601) 636-1544

WILKINSON COUNTY (Ingestion Pathway - GGNS and RBS)

Wilkinson County Emergency Management Agency
Director/ Interim Mattie Powell
EOC Address: 525 Main St., Woodville, MS
Phone: (601) 888-4381

YAZOO COUNTY (Ingestion Pathway - GGNS)

Yazoo County Emergency Management Agency
Director: Jack Willingham
EOC Address: 201 East Broadway Street, Yazoo City, MS
Phone: (662) 746-1569

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Annex A (Direction and Control)
Appendix 7 (Example of State of Emergency Proclamation)

A PROCLAMATION BY THE GOVERNOR

WHEREAS, _____ existing and expected to exist are of such grave nature that further development thereof could result in imminent danger of loss of life and property; and

WHEREAS, _____ has been and will be adversely affected by the _____ and as a result thereof _____ has occurred and will continue to occur over wide areas of _____, causing damage to homes, businesses and public property; and

WHEREAS, in consideration of the health and safety of the residents and the protection of their property within the affected area, and in the public interest all steps should be taken to protect people and property;

NOW, THEREFORE, I, _____, Governor of the State of Mississippi, pursuant to the authority vested in me under the Constitution of the State of Mississippi and Sections 33-15-11 and 33-15-3(a), Mississippi Code of 1972, and in the public interest and for the general welfare, do hereby proclaim a State of Emergency to exist in _____ in the areas affected by _____.

FURTHER, all agencies of the State of Mississippi shall discharge their emergency responsibilities set forth in Executive Order No. 653, dated November 16, 1990.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Mississippi to be affixed.

DONE at the Capitol in the City of Jackson this __ day of_____ in the year of our Lord nineteen hundred and _____ and of the Independence of the United States of America the two hundred and _____.

GOVERNOR

BY THE GOVERNOR

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Annex A (Direction and Control)
Appendix 8 (CBRNE Enhanced Response Force Package)

1. GEORGIA NATIONAL GUARD, JOINT TASK FORCE (JTF) 781 CERFP.

a. Mission: To provide immediate CBRN incident response capabilities to the governor including incident site search of collapsed buildings and structures, conducting rescue tasks to extract trapped casualties, providing mass decontamination, performing medical triage and initial treatment to stabilize patients for transport to medical facilities by the Incident Commander, and the recovery of CBRN incident fatalities.

b. Overview:

(1) The National Guard (NG) Chemical, Biological, Radiological, Nuclear, and high-yield Explosive Enhanced Response Force Package (CERFP) is comprised of five operational elements staffed by personnel from already established NG units. Elements include search and extraction, mass decontamination, medical, fatalities recovery, and command and control.

(2) The command and control team directs the overall lifesaving planning activities of the CERFP and coordinates mission tasks with the Homeland Response Force and the Incident Commander. The mass decontamination element is assigned to an ARNG Chemical Company. The medical element is assigned to an ANG Medical Group, and the fatalities search and recovery team to an ANG Services Squadron.

2. ELEMENTS OF THE CERFP.

a. Command and Control Element.

(1) Deploys and directs the overall missions of the National Guard Chemical, Biological, Radiological, Nuclear, and high-yield Explosive Enhanced Response Force Package.

(2) Reports to the Homeland Response Force and for Incident Commander.

(a) Search and Extraction Element

- Conducts casualty search and extraction (rescue) operations
- Extracts non-ambulatory victims

- Lifts and moves structural debris and heavy items using chains, ropes, and specialized jacks

- Uses mission equipment and lumber materials to build shoring to support the sides of a collapsed structure and prevent cave-ins

(b) Decontamination Element.

- Establishes mass casualty ambulatory/non-ambulatory decontamination lanes

- Conducts casualty log-in and log-out procedures

- Monitors operations for undress and redress, casualty wash/rinse operations

- Conducts post-wash/rinse hazard monitoring

(c) Medical Element

- Performs medical triage

- Provides Emergency Medical Technician (EMT) member on search and extraction teams for injury assessment/treatment

- Coordinates patient tracking and injured civilians or responder evacuation to the Incident Commander

- Provides medical support for all CERFP members

(d) Fatalities Search and Recovery Team

- Plans the CERFP incident remains recovery operations, conducts remains recovery

- Conducts remain recovery

- Transfers the remains to Incident Command System

Annex A (Direction and Control)
Appendix 9 (Weapons of Mass Destruction (WMD) Civil Support Team (CST))

1. 47TH WMD CST: 144 MILITARY DRIVE, FLOWOOD, MS 39232

a. Mission: To support civil authorities at a domestic Chemical, Biological, Radiological, and Nuclear high-yield Explosives (CBRNE) incident site by identifying CBRNE agents/substances, assessing current or projected consequences, advising on response measures, and assisting with appropriate requests for additional follow-on state and federal military forces. Units can also provide immediate response for intentional and unintentional CBRN or hazardous material (HAZMAT) releases and natural or manmade disasters that result in, or could result in, catastrophic loss of life or property.

b. Overview:

(1) The Adjutant General may employ the Weapons of Mass Destruction Civil Support Team (WMD-CST) to support the state response under the direction of the governor or to support another state's response under a supported governor. Each WMD-CST is comprised of 22 full-time, Title 32 Active/Guard/Reserve (AGR), Army (ARNG), and Air National Guard (ANG) personnel. The distribution of personnel on average is 18 ARNG and 4 ANG personnel, employed in 14 Army Military Occupational Skills or comparable Air Force Specialty Codes. The unit is divided into six sections: command, operations, communications, administration/logistics, medical/analytical, and survey.

(2) A unit's assigned transportation includes a command vehicle, operations trailer, a communications vehicle called the Unified Command Suite (which provides a broad spectrum of secure communications capabilities), an analytical laboratory system vehicle (containing a full suite of analysis equipment to support the complete characterization of an unknown hazard) and several general-purpose vehicles. The WMD-CST normally deploys using its assigned vehicles or can be airlifted as required.

2. KEY POINTS:

a. The WMD CST is a 24/7/365 asset that will identify CBRN agents and substances, assess current and projected consequences, advise on response measures, and assist with requests for additional support.

b. Members receive more than 650 hours of HAZMAT and high-tech training from agencies such as the Federal Emergency Management Agency, the Department of Energy, the Department of Justice, and the Environmental Protection Agency.

c. There are 57 WMD-CSTs are located in each state, U.S. territory, and Washington, D.C.; with two each in California, Florida, and New York.

d. Operates a unique equipment set including a specialized/secure communications vehicle (Unified Command Suite), and a mobile analytical laboratory system with a full suite of chemical, biological, and radiological analysis equipment.

e. The WMD CST is federally funded, resources, training, and sustained, but it is State Controlled.

Annex A (Direction and Control)
Appendix 10 (Functional Responsibilities Matrix)

Incident Command System Functional Area and Function		Organization																			
		County Administrators	City Officials	Health Officials/Radiological Health	County Emergency Management	State Emergency Management	Fire	County/City Law Enforcement	State Law Enforcement	Public Works	School District	Communications	Public Information Officers	Finance and Accounting	Transportation	Human Services	Agriculture / MSU Extension Services	Wildlife, Fisheries, and Parks	Military	Environmental
Command & Control	Command & Control	C	C	C	S	P	C	C	C	C	C		C		C	C	C	C	S	C
	Alerting Notification	P	P		P							P	P							
	Communications				S							P	P							
	Protective Response	C	C	P	S	S	P	P	P	P	C	P	S		S	S	P	P	P	P
	Public Information	C	C	S	C	S							P							
Operations	Fire & Rescue	C	C	S	S	S	P	C	C			S			S	S		S	S	
	Traffic Control	C	C		S	S		P	P			S							S	
	Emergency Medical Service			P	S	S	P	S	S			S			S				S	
	Accident Assessment	S																		
	Law Enforcement	C	C		S	S		P	P			S							S	
	Public Health			P	S	S													C	
Logistics	Sanitation	C	C	S						P										P
	Social Services				S											P				
	Transportation				S	S					S				P				S	
	Mass Care Facility			S	S	S										P				
	Evacuation	P	P	S	S	S		S	S		C		C		P				S	
Planning	Radiological Exposure Control	C	C	P	S	S	S	S	S										S	
	Public Education	P	P								P									
	Prevention & Preparedness	C	C	P	P	P	S	S	S	C	C	C	C		C	C	C	C	C	C
	Protective Response Training	C	C	P	P	P	S	S	S	C	C	C	C		C	C	C	C	C	C
Finance & Administration	Resource Management				P	P								P					S	
	Compensation / Claims				S	S								P					S	
	Procurement / Cost				S	S								P					S	
	Time				S	S								P					S	

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Annex B (Communications)

1. PURPOSE. To describe the State of Mississippi's communications system for direction, control, and coordination of the utility, local, state, tribal, and federal agencies response operations and to provide an alternate means of communications when normal channels become inoperable.

2. CONCEPT OF OPERATIONS.

a. General. Mississippi Emergency Management Agency (MEMA) is the lead State Agency for the overall coordination of emergency communications for Fixed Nuclear Facility (FNF) emergency response. Commercial telephone lines and dedicated telephone circuits will be the primary means of emergency communications, and a satellite telephone/radio system will be the backup means of emergency communications for coordination of a response to an FNF emergency.

b. Organization

(1) The SEOC is the focal point for state direction and control of all offsite emergency response at fixed nuclear facilities affecting Mississippi. For Grand Gulf Nuclear Station (GGNS) local response is controlled from the Port Gibson/Claiborne County EMA. For River Bend Station (RBS), a local response will be controlled from each affected county's EOC. The communication systems and equipment available in the SEOC is described in Appendix 1. (Appendix 2 depicts the interconnects available.)

(2) The following agencies have mobile facilities and equipment to establish field EOCs. Some or all of these agencies will deploy their equipment, depending on the magnitude of the response required:

(a) Mississippi Emergency Management Agency

(b) Mississippi State Department of Health/Div. Radiological Health

(c) Mississippi Highway Patrol

(d) Mississippi Military Department

(3) The GGNS/RBS off-site communication system (INFORM) is a protected program using secure internet ports to deliver electronic emergency event notification and hard copy emergency notification forms that originate from the Control Rooms or Emergency Operation Facilities of either GGNS or RBS respectively, to several offsite response organizations, both state and local, as shown in Appendix 3. This is the Primary Means of communication, but one of several

means for providing emergency alert and notification information to these offsite organizations regarding plant conditions. This hard copy notification may be followed by a confirmation call using the OHL (or other secondary means like telephones, satellite phones, radio communications, etc. as delineated in the Licensee's Emergency Plans).

(4) The Operational Hotline (OHL) is a dedicated telephone network and dedicated radio base station that originates in the Control Rooms of either GGNS or RBS respectively, to several offsite response organizations, both state and local, as shown in Appendix 3. This system provides emergency alert and notification to these offsite organizations regarding plant conditions. RBS also has a printer network complimenting its radio base station.

(5) The Alert and Notification System/Emergency Alert System (ANS/EAS). The line is a commercial telephone line linking the three key decision-makers, MEMA and MSDH/DRH Directors to the CCEMA Director. It will be used to discuss and reach a decision on the utility's protective action recommendations. At the discretion of the Executive Director, HSIN Connect may be used for video conferencing.

c. Responsibilities.

(1) The MEMA Executive Director is responsible for the overall operation of the SEOC and for providing adequate communications to direct and coordinate the response.

(2) MEMA serves as the State Warning Point and is responsible for making notifications as outlined in Annex C, Appendix 5.

(3) The Operations Section Chief is responsible for the supervision of all activities within the Warning Point of the SEOC. The Operations Section Chief is also responsible for providing additional communications support as deemed necessary by MEMA Executive Director.

(4) The MHP is responsible for the proper use of their equipment and the proper handling of messages. MHP's mobile field unit will provide support to facilitate effective communications when requested. MHP also serves as MEMA's back-up communication center.

(5) The MSDH/DRH, in coordination with MEMA, provides communications equipment for RERTs.

(6) Other agencies provide support and/or backup communications as needed.

Annex B (Communications)
Appendix 1 (Communications at SEOC)

AGENCY	ACCESS	COVERAGE	REMARKS
FEMA			
NAWAS	Terminal	Statewide	Note 1
National Weather Service	NAWAS	Interconnects Statewide	Note 2
MEMA			
MEMA	MSWIN	Transportable	Communications
MEMA	SATNET	Eastern & Mid USA	MEMA
Emergency Alert System	Telephone Base Station 161.67 MHz	WJDS AM Radio WMSI FM Radio	Note 3
MS National Guard	Base Station VHF 41.80 MHz HF 4.960 MHz 45.92 MHz	Statewide	
Common Carrier	Telephone	Nationwide	
Common Carrier	ANS Line	SEOC/CCEOC Interconnect	Note 4
Common Carrier	RAAO/REM	SEOC/EOF	Note 5

AGENCY	Line ACCESS	Interconnect COVERAGE	REMARKS
MEMA	FAX Machine	National	Note 6
GGNS (Utility)	GGNS Operational Hotline	Warning Points in MS & LA	Note 7
GGNS/RBS (Utility)	GGNS INFORM System	Warning Points in MS & LA	Note 7
RBS (Utility)	RBS Radio Base Station & Fax	Warning Points in LA & MS	Note 8

NOTES:

1. Primary Warning Circuit connects MEMA with all MHP Districts, National Weather Service Offices, Local Law Enforcement, and Local Civil Defense/Emergency Management Offices throughout the state. Note Claiborne County CD does not have NAWAS circuit.

2. Complete weather coverage is provided for Mississippi; severe weather information is provided for Arkansas and Louisiana.

3. State Control.

4. GGNS Operational Hotline: This is a commercial telephone used by the MEMA Director, MSDH/DRH Director, and the CCEMA Director to discuss protective action recommendations before implementation/activation of the ANS/EAS System.

5. Rad. Accident Assessment Officer (state)/Rad. Emergency Manager (utility) Line. This is a commercial telephone line linking the MSDH/DRH at the SEOC to the Utility's EOF to be used for advance notice of dose projections and protective action recommendations.

6. Dedicated telephone line located in the SEOC Operations Room for MSDH/DRH use for incoming facsimiles only.

7. Grand Gulf Nuclear Station control. See Annex B, Appendix 3.

8. River Bend Nuclear Station control.

9. HSIN Connect – Protected video conferencing.

Annex B (Communications)
Appendix 2 (Mobile Communication Links)

STATE AGENCY MOBILE FIELD EMERGENCY OPERATING FACILITIES	AVAILABLE INTERCONNECTS
MEMA	Mobile Command Trailers (3)
MSDH/DRH	SATNET SEOC Jackson/ Local MSDH Mobiles/ Portables MHP Statewide Law Enforcement Agencies Local CD/ EMA
MHP Unit 735 (Mobile Commo)	MHP District 1,5,8 Mobiles MHP Districts 2,4,7 Mobiles MHP Districts 3,6,9 Mobiles Local Law Enforcement Agencies Local CD/EMA MEMA Mobile Units
MNG Mobile EOC	MNG EOC Jackson MNG Units/Mobiles MEMA Local Mobile Units MHP District Mobiles SATNET – Statewide
MDOT	SATNET
HOSPITALS:	
Claiborne County Hospital – Port Gibson, MS	Statewide VHF High band/EMS SATNET Telephone/Cell
River Region Medical Center – Vicksburg, MS	Statewide VHF High band/EMS SATNET Telephone/Cell

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Annex B (Communications)
Appendix 3 (GGNS/RBS INFORM System)

1. The GGNS/RBS off-site Primary Communication System (INFORM) is a protected program using secure internet ports to deliver electronic emergency event notification and hard copy emergency notification forms that originate from the Control Rooms or Emergency Operation Facilities of either GGNS or RBS respectively, to several offsite response organizations, both state and local.

a. GGNS/RBS INFORM uses a protected program via the Internet for MEMA, Claiborne County EOC, MHP, LRPD, LOEP, and Tensas Parish SO to be sent a hard copy Emergency Notification form at the beginning of an event.

b. Each station is controlled by the GGNS/RBS telecommunications Section.

c. Each Station on the network is equipped with a computer, screen, and printer capable of enunciating a signal bell and flashing colored message.

d. Only GGNS/RBS will be able to initiate the INFORM system. No other station can initiate the system from its location. Stations can only receive hard copy forms from GGNS/RBS.

e. GGNS/RBS OHL may be used to confirm the message was received or provide clarification.

f. GGNS/RBS INFORM messages (initial and follow-up) will contain the information as annotated in the Utility Emergency Plan (GGNS Emergency Plan, Planning Standards and Evaluation Criteria, E. Notification Methods, and Procedures).

2. Guidelines for Use.

a. When GGNS/RBS INFORM is activated, all stations will receive a visual and audible alarm.

b. When the message is acknowledged by the recipient agency, the message can be printed.

c. GGNS/RBS may perform a verification follow up call via the OHL once the notification is sent.

3. GGNS Operational Hotline.

a. The Grand Gulf Nuclear Station (GGNS) Operational Hot Line (OHL) is a dedicated telephone system designed to allow the operators of GGNS to notify offsite agencies of conditions at the plant which might impact their jurisdictions.

(1) GGNS OHL uses the Entergy fiber-optic network for MEMA, MHP, LRPD, LOEP, and Tensas Parish SO. It uses an AT&T circuit for Port Gibson/Claiborne County Emergency Management, Port Gibson PD, and Claiborne County SO.

(2) Each station is controlled by the GGNS telecommunications Section.

(3) Each Station on the network is equipped with a push-to-talk handset, loudspeaker, signal bell, and flashing light.

(4) Only GGNS will be able to initiate a ring-down. No other station can initiate a call from their location. Stations can only receive calls from GGNS.

(5) GGNS OHL has an automatic ring sequence of from two to five minutes, if after that time it is not answered, the OHL will disconnect.

(6) Once a station answers the GGNS OHL, they are automatically conferenced with the rest of the network.

b. Guidelines for Use:

(1) When GGNS OHL is activated, all stations will ring until the handset is lifted.

(2) When the handset is lifted, that station is automatically connected to the network.

(3) The handset must be off hook to hear the speaker.

(4) The push-to-talk bar on the handset must be pressed to speak.

(5) GGNS will perform a roll call at the beginning and the end of the notification.

(6) DO NOT HANG UP THE PHONE UNTIL SPECIFICALLY INSTRUCTED TO

DO SO!

c. Activation. For activation of the GGNS OHL for emergency purposes or during drills and exercises, the following network call up procedures will be followed:

(1) The GGNS Communicator activates the OHL network.

(2) Upon hearing the ring, each station will lift the handset and standby for a roll call. NO STATION WILL TRANSMIT ON THE NETWORK UNTIL INVITED TO DO SO BY THE COMMUNICATOR.

(3) Within approximately 30 seconds of the initial ring, THE COMMUNICATOR will initiate a roll call to confirm all stations are online and ready to receive the transmission. THE COMMUNICATOR will say, "This is Grand Gulf Nuclear Station, this is an Emergency Notification, standby for an initial roll call. Please acknowledge as your name is called". The following stations constitute the GGNS OHL network:

(a) Mississippi Emergency Management Agency

(b) Claiborne County Sheriff's Office

(c) Port Gibson Police Department

(d) Tensas Parish Sheriff's Office

(e) Louisiana Office of Homeland Security and Emergency Preparedness

(f) Highway Patrol, District 1 – Jackson

(g) Port Gibson/Claiborne County Emergency Management

(h) Louisiana Department of Environmental Quality

Note that Stations 1, 2, 3, 4, and 5 are primary agencies for notification, and Stations 6, 7, and 8 are secondary agencies.

(4) After the initial roll call, each station will prepare to copy message information onto the Notification Message Form as it is presented. **The COMMUNICATOR will read the message slowly allowing each station to copy the information as completely as possible:**

(If a drill) - - "This is Grand Gulf Nuclear Station. This is a drill . . .

Repeat . . . This is the Grand Gulf Nuclear Station. This is a drill. This is Grand Gulf Nuclear Station with Message # _____."

(If an Emergency Notification) - - "This is Grand Gulf Nuclear Station. This is an Emergency Notification. . . **Repeat** . . . This is the Grand Gulf Nuclear Station. This is an Emergency Notification. This is Grand Gulf Nuclear Station with Message # ___."

(5) THE COMMUNICATOR will read the entire message. If a station requires clarification or restatement of any item, THE COMMUNICATOR will allow the network to ask for clarification after the message.

(6) After reading the entire message and clarifying any questions, THE COMMUNICATOR will then initiate a final roll call. When your station's name is called, acknowledge by stating the name of your station.

(7) When all stations have acknowledged the message and the OHL is **NOT** to remain as an OPEN line, THE GGNS COMMUNICATOR will sign off saying: "This notification is complete .....All Stations hang up at this time, this is Grand Gulf Nuclear Station, out".

* River Bend Station also has a radio base station designed to allow its operators to notify Mississippi of conditions at the plant which might impact Mississippi counties. RBS OHL drops are located at MEMA and MHP, District 1 - Jackson. Also, RBS has a printer network that complements its OHL by supplying a hard copy of the notification forms. Other than the printer network, both RBS and GGNS OHLs are similar.

Annex B (Communications)
Appendix 3 (GGNS/RBS INFORM System)
Tab A (Location of GGNS INFORM Operational Hotline Stations)

1. Mississippi Emergency Management Agency*
   #1 MEMA Dr., Pearl, MS 39208

2. Mississippi Highway Patrol - District 1*
   I-55 N at Woodrow Wilson, Jackson, MS

3. Port Gibson/Claiborne County Emergency Management
   Highway 18, Port Gibson, MS

4. Claiborne County Sheriff's Office
   Market Street, Port Gibson, MS

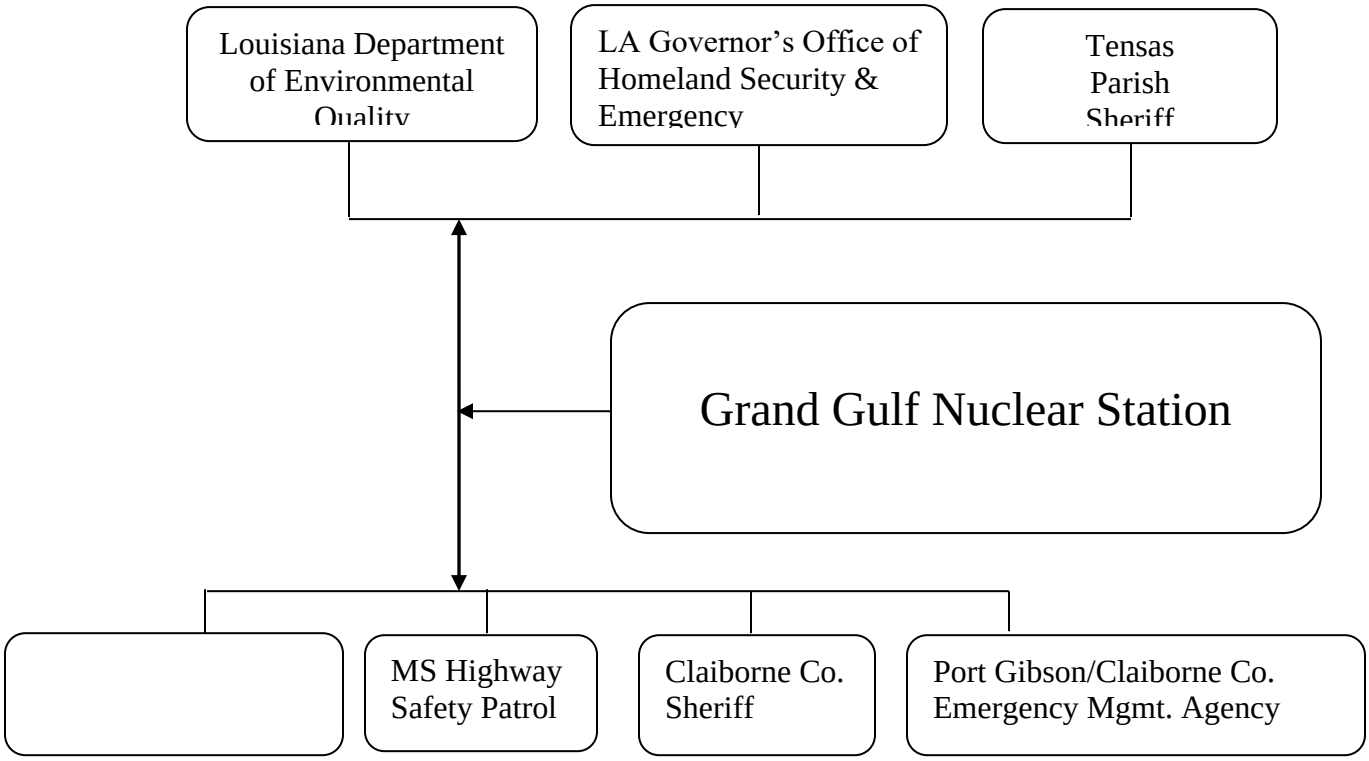
5. Tensas Parish Sheriff's Office
   St. Joseph, LA

7. Louisiana Office of Homeland Security and Emergency Preparedness* (LHLS/EP)
   Baton Rouge, LA

8. Louisiana Department of Environmental Quality (LDEQ)*
   Baton Rouge, LA

* RBS OHL/RBS drop located at these sites.

GGNS INFORM/OHL INITIAL AND FOLLOW-UP NOTIFICATION FLOW CHART



Annex B (Communications)
Appendix 4 (SEOC Internal Message Control Procedures)

1. MESSAGE ORIGINATION. Messages may be "real-world" or "exercise" messages. Messages may be received from various sources. ALL exercise messages will be marked "EXERCISE ONLY". The primary method of message communication will be the utilization of the State Emergency Operations Center (SEOC) WebEOC.

2. MESSAGE FLOW.

a. All messages and faxes transmitted and received will be routed through ESF-5 Message Control for action, coordination, and/or information. All messages, both incoming and outgoing will be logged into the WebEOC System.

b. Routing Order. All messages were received.

(1) SEOC Communications

(a) Print messages as they are entered into WebEOC.

(b) WebEOC automatically assigns each message a message number.

(c) Forward all WebEOC Tracker messages to Operations Officer.

(2) Facsimile (FAX)

(a) All incoming and outgoing faxes must be routed through SEOC Communications

(b) SEOC Communications will maintain a log of incoming and outgoing faxes separate from the WebEOC System.

(c) Incoming faxes. Will be distributed by SEOC Communications to fax recipient(s).

(d) Outgoing faxes. Director, Chief of Staff, Deputy Director, Deputy Administrator, Operations Bureau Director, Operations Duty Officer, Public Information Officers, and State Agency/ESF Emergency Coordinators have signatory rights to release faxes.

c. Operations Officer/Mission Assigner – Operations Support.

(1) If a message requires a response:

(a) Designate State Agency/ESF or multiple State Agencies/ESF's to respond to message. Ensure that at least one ESF is designated as primary for purposes of the lead agency.

(b) Forward WebEOC task to State Agency/ESF assignments.

(2) If the message does not require a response, automatically forward it to SEOC Communications.

d. Responding State Agency/ESF

(1) Fulfill the message response request.

(2) When the message response request is fulfilled, enter all information related to action(s) taken, particularly whether actions required are complete or not.

(3) Send to (1) Operations, (2) SEOC Communications, and (3) other agencies as required to complete the action.

e. Non-prescribed Messages.

(1) Originating State Agencies/ESF's and MEMA SEOC Staff. Message recipients will take down the message including (1) Date, (2) Time, (3) Agency/ESF taking the message, (4) Who the message is from (including name, organization, and phone number(s), and text of the message).

(2) Enter the complete message into WebEOC ensuring all information is included. Designate message to (1) Operations and (2) SEOC Communications. DO NOT DISTRIBUTE TO OTHER AGENCIES/ESF's.

f. Responding State Agencies/ESF's

(1) Fulfill the message response request.

(2) When the message response request is fulfilled, utilize WebEOC to indicate all actions are taken and status (complete/incomplete).

3. PUBLIC INQUIRY.

a. Public inquiry personnel receive in-coming messages from outside sources and act as the

originator in transferring these messages to SEOC Communications.

b. Public inquiry personnel is responsible for transmitting replies from the SEOC staff to the general public.

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Annex C (Alert and Notification)

1. PURPOSE. To describe procedures, organizations and facilities used to alert, warn, notify, and inform the populace in the event of a radiological emergency at a fixed nuclear facility. It also outlines facilities and methods used to relate emergency information from the fixed nuclear facility to offsite agencies to increase their readiness posture and provide information from which protective action decisions may be made.

2. CONCEPT OF OPERATIONS.

a. General. When an emergency occurs at one of the two fixed nuclear facilities affecting Mississippi, the plant personnel are required to classify the emergency according to federal guidelines and their written procedures. Once an emergency classification has been declared and offsite protective action recommendations, if any, have been determined, the operators have 15 minutes to notify offsite authorities of the plant status and the protective action recommendations. The plant furnishes information per the Notification Message Form (Appendix 1). A dedicated telephone system (Operational Hot Line) or a computer-based program using secure internet ports to deliver electronic emergency event notification and hard copy emergency notification forms (INFORM), is in place between each fixed nuclear facility and appropriate offsite emergency response agencies to provide initial and follow up information should an accident occur. (See Annex B, Appendix 3)

When, in the course of an emergency, protective actions for the public are to be recommended or ordered, the public Alert and Notification System (ANS) provides Mississippi the capability for transmitting both an alert signal, via sirens and an informational or instructional message, via the Emergency Alert System (EAS), to essentially 100% of the population throughout the 10-mile plume exposure pathway within 15 minutes of a protective action decision. Activation of this system is a combined state and local responsibility (See Appendices 2 and 3).

For alerting and notifying the public, several systems have been established to ensure essentially 100% coverage of the general public. A fixed siren system is installed within the Grand Gulf Nuclear Station's (GGNS) 10-mile EPZ for alerting the populace. Tone alert receivers are placed in various locations to supplement the siren system. The system is capable of alerting and providing notification information to the public 24 hours a day within the GGNS 10-mile EPZ.

A maintenance contractor is employed by GGNS to ensure the reliability of the system. Full activation tests are performed monthly to verify operability. The GGNS Emergency Public Information Calendar lists the days siren tests are scheduled (See Annex O).

The minimum design objectives of the Alert and Notification System are to:

(1) Ensure that the system is capable of providing an alert, along with the proper notification, information to the plume population on an area-wide basis throughout the plume exposure pathway EPZ within 15 minutes.

(2) The initial notification system will provide essentially 100% coverage to the population within 10-miles of the site within 45 minutes.

The State has an Emergency Alert System (EAS) in place to ensure that coordinated action-oriented information and notification of the population occurs. Emergency public information activities are initiated to inform the public of the nature and severity of the accident. This is accomplished through press statements and electronic media coverage. Public information is coordinated from the Joint Information Center (JIC) in Pearl, MS. (See Annex J).

b. Organization. The organization for the Alert and Notification System is shown in Appendix 3.

c. Responsibilities.

(1) Fixed Nuclear Facility. The plant operators will assess and declare emergencies according to guides and procedures. The plant will then notify appropriate offsite agencies and provide the information required to complete the Notification Message Form. The plant operators continue to provide information as required by regulatory procedures or as needed by state officials.

(2) Mississippi Emergency Management Agency (MEMA). As the State 24-hour Warning Point, MEMA receives initial and follow-up information from the plant concerning an emergency declaration. The Notification Message Form is completed with all available information. Upon receipt of the information, MEMA will notify the Mississippi State Department of Health/Division of Radiological Health (MSDH/DRH) and pass on all available information. If the event is at GGNS, MEMA verifies that the Port Gibson/Claiborne County Civil Defense received the emergency information. If the event is at River Bend Station (RBS), MEMA makes certain affected Mississippi counties are made aware of the emergency in Louisiana. MEMA is responsible for notifying appropriate local, state, and federal governmental agencies as necessary. MEMA will activate the EAS system when necessary. Notifications will be made per Appendix 5.

(3) Mississippi State Department of Health/Division of Radiological Health. MSDH/DRH receives emergency information from MEMA and verifies this information with the plant. They

will notify their response personnel according to their SOP. The MSDH/DRH will provide protective action recommendation information to MEMA as soon as it is available. MSDH/DRH will provide personnel to the SEOC to receive emergency information from fixed nuclear facilities as soon as the SEOC is activated.

(4) Local. The Alert and Notification System, including the tone alert receivers, are activated by the Port Gibson/Claiborne County Emergency Management Agency (EMA).

The Claiborne County Sheriff's Office will supplement the Alert and Notification System through the use of a Back-up Route Alerting procedure to ensure adequate coverage in the event of a siren failure.

d. System Testing. All components of the Alert and Notification System are tested on a scheduled basis. The Port Gibson/Claiborne County Civil Defense tests the siren system on the first Wednesday of every month and all results are recorded and forwarded to the REP Program Manager at MEMA. Each Quarter the REP Program Manager will develop a Quarterly Operability Report and distribute the report to the Louisiana Department of Environmental Quality (LDEQ) and copy Grand Gulf, FEMA Region IV, Claiborne County, and Tensas Parish. The EAS is tested monthly and supplemental alert systems are tested routinely.

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Annex C (Alert and Notification)
Appendix 1 (Notification Message Form)

SAMPLE

EMERGENCY NOTIFICATION FORM

1. THIS IS GRAND GULF NUCLEAR STATION WITH MESSAGE NUMBER _____

2. A. TIME _____DATE_____ B. COMMUNICATOR:_____ C. TEL NO. 601-437-_____

3. **EMERGENCY CLASSIFICATION:**

A. ❑ NOTIFICATION OF UNUSUAL EVENT C. ❑ SITE AREA EMERGENCY E. ❑ TERMINATED
B. ❑ ALERT D. ❑ GENERAL EMERGENCY

4. **CURRENT EMERGENCY CLASSIFICATION** ❑ DECLARATION TIME:_____ DATE:_____
❑ TERMINATION TIME:_____ DATE:_____

5. **RECOMMENDED PROTECTIVE ACTIONS:**

A. ❑ No Protective Actions Recommended At This Time (Go to item 6).

B. ❑ Consider prophylactic use of Potassium Iodide in accordance with State Plans.
AND
EVACUATE ALL sectors to 2 miles. EVACUATE sectors _____ to 5 miles.
AND
SHELTER the remainder of the 10 mile EPZ with the exception of areas previously recommended for evacuation.

C. ❑ Consider prophylactic use of Potassium Iodide in accordance with State Plans.
AND
EVACUATE ALL sectors to 2 miles. EVACUATE sectors _____ to 10 miles.
AND
SHELTER the remainder of the 10 mile EPZ with the exception of areas previously recommended for evacuation.

D. ☐ Consider prophylactic use of Potassium Iodide in accordance with State Plans and Shelter

6.a **EAL#**:_____

6.b **INCIDENT DESCRIPTION/UPDATE/COMMENTS**_____

_____

_____

7. **REACTOR SHUTDOWN?** ❑ NO ❑ YES TIME:_____DATE: _____

8. **METEROLOGICAL DATA**: ❑ NOT AVAILABLE AT THIS TIME (Go to item 9)

A. WIND DIRECTION **FROM** _____Degrees at _____ MPH

B. SECTORS AFFECTED (A-R)_____ C. STABILITY CLASS (A-G)_____

D. PRECIPITATION: ☐ None ☐ Rain ☐ Sleet ☐ Snow ☐ Hail ☐ Other_____

9. **RELEASE INFORMATION**:

A. ❑ NO RELEASE (Go to item 13)

B. ❑ A RELEASE is occurring BELOW federally approved operating limits. *(Go to item 9E)*

C. ❑ A RELEASE is occurring ABOVE federally approved operating limits. *(Go to item 9E)*

D. ❑ A RELEASE OCCURRED BUT STOPPED *(Go to item Go to item 9E)*

E. Release started at _____ (time) Release stopped at _____ (time) Release Duration _____hrs (Actual or Expected)

10. **TYPE OF RELEASE:**
A. ❑ Radioactive Gases B. ❑ Radioactive Airborne Particulates C. ❑ Radioactive Liquids (Go to item 13)

11. **RELEASE RATE:** A. NOBLE GASES_____ Ci/s B. IODINES _____ Ci/s

12. **ESTIMATE OF PROJECTED OFF-SITE DOSE**: A. Projections for _____hours based on: ❑ Field Data ❑ Plant Data

B. TEDE – WB DOSE COMMITMENT(mRem)	C. CDE – THYROID DOSE COMMITMENT (mRem)
Site Boundary _____ 5 miles_____	Site Boundary _____ 5 miles_____
2 miles _____ 10 miles_____	2 miles _____ 10 miles_____

13. **MESSAGE APPROVED BY:** _____ EMERGENCY DIRECTOR

Return to communicator instructions line J

Reviewed				
Sections (3,4,6)			Sections(5,7,8,9,10,11,12)	
EOF Manager	Init	RAC	Init	PAR Change Time

EPP 06-01, REV. 22 (01/11)

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Annex C (Alert and Notification)
Appendix 2 (Alert/Notification Timing Process)

For each Emergency Classification Level (ECL) the time frame for activating the alert and notification system begins from the point at which the designated officials (Decision Makers*) decide to make a declaration that necessitates the activation of the alert and notification system. As indicated in the chart below, there are decision-making time overlaps available to offsite officials that are not typically calculated into the 15-minute time frame.

The following chart illustrates the key steps in the alert and notification process:

TIMING CHART

Issued Emergency Declaration by a Utility	Licensee notifies Public Officials	Authorized Public Officials reach a decision which requires activating the Alert & Notification System	Alert signal activated an instructional message via Alert System.
15 minutes	**15 minutes**	**15 minutes**	

Decision-making time for Public Officials varies from virtually no time available in a fast-breaking incident to substantial time in a slow evolving incident.

* The Decision Makers in Mississippi are the MEMA Executive Director, the MSDH/DRH Director, and the Port Gibson/Claiborne County Emergency Management Agency Director.

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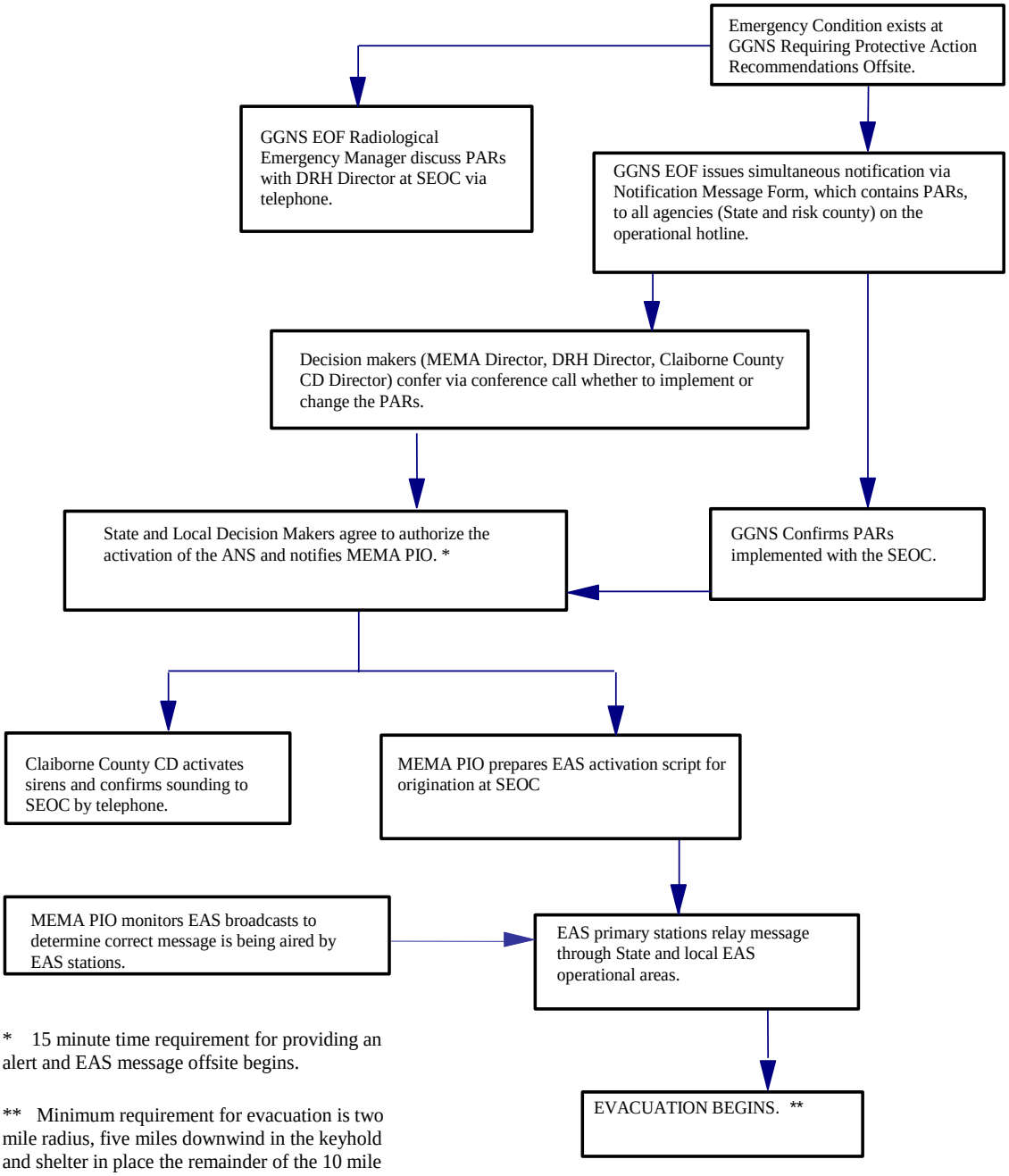
Annex C (Alert and Notification)
Appendix 3 (GGNS ANS Coordination Flow Chart)



* 15 minute time requirement for providing an alert and EAS message offsite begins.

** Minimum requirement for evacuation is two mile radius, five miles downwind in the keyhold and shelter in place the remainder of the 10 mile EPZ.

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Annex C (Alert and Notification)
Appendix 4 (Alert and Notification System)

1. WARNING SIRENS. There are 30 fixed outdoor sirens in Claiborne County, Mississippi, all located within the GGNS 10-mile EPZ. The Port Gibson/Claiborne County Civil Defense is responsible for the activation of the system. These tests are conducted on the first Wednesday of every month. It is also responsible for the monthly testing and documentation of those tests. The Claiborne County Sheriff's Office provides backup and after-hours siren activation capability.

2. TONE-ALERT RECEIVERS. There are typically 31 tone-alert receivers in place in Claiborne County, Mississippi. One of the tone Alert Receivers is used only seasonally. The tone alert receivers are located in schools, motels, day-care centers, residents, the hospital, businesses with more than 15 employees, an industrial plant, a senior citizen residential facility, trailer park, and nursing facilities. The tone alert receivers function to supplement the outdoor warning sirens. The Port Gibson/Claiborne County Civil Defense is responsible for activating these receivers.

3. LOCAL LAW ENFORCEMENT. The Claiborne County Sheriff's Office is the 24-hour county warning point and is responsible for route alerting within the 10-mile EPZ. This alerting is along prearranged routes to ensure 100% coverage in the event of a siren failure.

4. EMERGENCY ALERT SYSTEM (EAS). The EAS uses commercial radio and TV stations covering the 10-mile EPZ to notify the public and deliver action-oriented information. MEMA will activate EAS. EAS activation and siren sounding must be coordinated between the State and Claiborne County EOC. EAS messages follow the siren activation by about three minutes.

5. OPERATIONAL HOTLINE (OHL). The OHL is a dedicated telephone system originating at the fixed nuclear facilities and going directly to several offsite agencies. This system is tested weekly to ensure that equipment is operational. In the event of an incident, the OHL is activated by the affected FNF per their onsite emergency plan. GGNS and RBS are responsible for the maintenance and repair of their respective systems (RBS has a printer network that complements its OHL by supplying hardcopy of the notification message forms).

6. ALERT AND NOTIFICATION SYSTEM / EMERGENCY ALERT SYSTEM (ANS/EAS) LINE. The ANS/EAS Line is a telephone line linking the MEMA Director and MSDH/DRH Director to the Port Gibson/Claiborne County Emergency Management Agency Director. This line will be used to discuss and reach a decision on protective action recommendations before implementation/activation of the warning sirens and EAS broadcast. MEMA is responsible for testing of the ANS/EAS Line.

7. INFORM SYSTEM. The GGNS/RBS off-site communication system (INFORM) is a protected program using secure internet ports to deliver electronic emergency event notification and hard copy emergency notification forms that originate from the Control Rooms or Emergency Operation Facilities of either GGNS or RBS respectively, to several offsite response organizations, both state and local, as shown in Appendix 3. This is one of several means for providing emergency alert and notification information to these offsite organizations regarding plant conditions. This hard copy notification may be followed by a confirmation call using the OHL (or other secondary means like telephones, satellite phones, radio communications, etc. as delineated in the Licensee's Emergency Plans).

Annex C Alert and Notification)
Appendix 4 (Alert and Notification System)
Tab A (Claiborne County Siren Locations)

CLAIBORNE COUNTY SIREN LOCATIONS

REMOTE	SIREN	LOCATION
MAA	1	Heavy Haul Road Near MS River
MAB	2	Grand Gulf Road Across from Grand Gulf Park
MAC	3	Grand Gulf Road and Bald Hill Road
MAD	5	HWY 61 North to Togo Island
MBA	4	Y-Camp Road Near Warner- Tully's YMCA
MBB	12	Grand Gulf Road Behind Old Exchange Club Lounge
MBC	13	Ingleside Road End of Ingleside Ferry Road
MBD	14	1-Mile West on HWY 61 off Ingleside Road
MBE	15	1-Mile North off Hilltop Deli on HWY 61
MBF	16	HWY 462 in Willows
MBG	17	HWY 61 and Floyd Road (Deer Park)
MBH	18	Hankinson Road (Daniel Lucas Home)
MBI	34	HWY 61 and 462 (Crossroad Store)
MCA	19	HWY 61 Near Port Gibson City Limits
MCB	22	HWY 18 1-Mile East of Natchez Trace
MCC	23	Old HWY 18 1-Mile from New HWY 18
MCD	24	Valley of Moon Road 2-Miles from Old HWY 18
MDA	20	HWY 547 at Chamberlain Hunt Academy
MDB	21	HWY 547 Near Mercy Seat Church
MDC	31	Rodney Road and Bessie Weather's Road
MDD	35	Anthony Street at A.W. Watson Jr. High
MDE	36	Chinquapin Street at City Barn Store
MDF	42	Tillman Road 1-Mile East of Moore's Road
MEA	29	Rodney Road 3-Miles from Windsor Ruins
MEB	30	1/4 Mile West of HWY 61 on Russum Road
MEC	32	Russum Road at Howard's Residence
MED	33	Rodney Road at High Point Site
MEE	37	HWY 61 and Gordon Station Annex
MEF	43	Gordon Station Road 2-Miles West of Pine Grove
MFA	25	Alcorn State University and Recreation Park

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Annex C (Alert and Notification)
Appendix 4 (Alert and Notification System)
Tab B (Claiborne County Tone Alert Receiver Locations)

Alcorn State University (Daycare) Alcorn State University (Police) Alcorn State University (Student's Affairs) A. W. Watson, Jr., Elementary School Arnold's Residence, Melvin Arnold Ashland Trailer Park * Chamberlain Hunt Academy Claiborne County Health Department Claiborne County Family Health Center Claiborne County Hospital Claiborne County Nursing Center Claiborne County Dept. Human Services Claiborne County Alternative School Claiborne County Education Foundation Claiborne County Vo-Tech Center Claiborne County Superintendent of Education * Seasonally Occupied	Concern Citizen Daycare Heavenly Angels Daycare Grand Gulf Inn Grand Gulf Military Park Little Kids College/University (Daycare) Millcreek of Port Gibson Port Gibson High School Port Gibson Middle School Port Gibson Water Department Prestige Plaza U.S. Dinner Ware Richardson Head Start Center River Hills Bank Southwest MS Mental Health V & B International (Office)

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Annex C (Alert and Notification)
Appendix 5 (State Warning Point Radiological Emergency Notification Procedures for Fixed Nuclear Facilities)

Procedures are identical for Notification of Unusual Event (NOUE) Alert, Site Area Emergency (SAE), and General Emergency (GE). 24-hour notification process is as follows:

1. MEMA (State Warning Point) receives notification from Grand Gulf Nuclear Station (GGNS), River Bend Station (RBS) over the Operational Hot Line (OHL) or INFORM system.

2. MEMA completes the Notification Message Form.

3. Emergency Telephone Numbers for contacting MEMA (normal and after hours):

   601-933- 6875 or 1-800-222-6362

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Annex C (Alert and Notification)
Appendix 6 (Fixed Nuclear Facility Incident Notification Procedures)

1. GENERAL. When notification of an emergency condition at a fixed nuclear facility is given, MEMA Communications personnel or MEMA Operations Officer will call the agencies listed and relay the emergency notification message. MEMA personnel are to record the name of an individual contacted in each agency and the time of contact.

Remember that all persons notified must be called again to either cancel the emergency condition or be advised the emergency condition has escalated unless these personnel have reported and are posted in the SEOC. *(Note that messages can be used for testing and exercise purposes by emphasizing BEFORE and AFTER stating message text - **"THIS IS A TEST EXERCISE MESSAGE".)***

2. GRAND GULF NUCLEAR STATION EMERGENCY CLASSIFICATION LEVEL NOTIFICATIONS.

a. Notification of Unusual Event [GGNS].

INITIAL RESPONSE GROUP (NOUE)

MEMA Director	MEMA Deputy Director
MEMA Chief Operating Officer	MEMA Preparedness Director
MEMA Operations Section Chief	MEMA Central Region Bureau Director
MSDH/DRH	MDOT
MEMA PIO	MEMA Support Services Director
MOHS	FBI

Message: "Mr. / Ms., this is [Name] from the Mississippi Emergency Management Agency calling to advise that the Grand Gulf Nuclear Station has declared a **Notification of Unusual Event**. No action is required of you at this time, if the emergency classification level increases to an ALERT, you will be notified to report to the SEOC. You will be kept advised of any further developments."

VERIFY THAT THE FOLLOWING HAVE BEEN NOTIFIED OF ECL IN PROGRESS:

Claiborne County EOC, LDEQ, GOHSEP, Tensas Parish, LA

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency

Management Agency calling to advise that the Grand Gulf Nuclear Station has declared a **Notification of Unusual Event**.

b. ALERT [GGNS]

(VERIFY If Prior ECL In Progress and/or CONTACT, if Initial Notification, No Previous Action Taken.)

CONFIRM THAT THE INITIAL RESPONSE GROUP IS NOTIFIED TO REPORT TO THE SEOC.

FIRST RESPONSE GROUP (ALERT)

MSDH/EMS	MDPS/MHP	MDHS
ARC	MBAH	MSDE
Salvation Army	MDAC	MSU-ES
MDMH	MSNG/MMD	MDEQ
DWFP	MDA/ED	MFC

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency Management Agency calling to advise that the Grand Gulf Nuclear Station has declared an **ALERT**. The SEOC has been activated and you are to report immediately to the SEOC per the State REP Plan."

VERIFY THAT THOSE LISTED BELOW HAVE BEEN NOTIFIED OF PRIOR ECL IN PROGRESS AND/OR CONTACT IF INITIAL NOTIFICATION, *NO PREVIOUS ACTION TAKEN:*

Claiborne County EMA	Hinds County EMA
Copiah County EMA	Warren County EMA
Adams County EMA	LDEQ
Tensas Parish, LA EMA	LA GOHSEP
FEMA Region IV	

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency Management Agency calling to advise that the Grand Gulf Nuclear Station has declared an **ALERT**."

c. SITE AREA EMERGENCY [GGNS]

(*VERIFY If Prior ECL In Progress and/or CONTACT If Initial Notification, No Previous Action*

Taken.)

CONFIRM THAT THE INITIAL RESPONSE GROUP IS NOTIFIED.

FIRST RESPONSE GROUP (SAE)

MSDH/EMS	MDPS/MHP	MDHS
ARC	Salvation Army	MDAC
MBAH	MSU-ES	MDMH
MSNG/MMD	MDEQ	DWFP
MDA/ED	MFC	MDOE
MS Office of the Governor		

Message: "Mr. / Ms. _____, this is _____ calling from the Mississippi Emergency Management Agency to advise you that the Grand Gulf Nuclear Station has declared a **SITE AREA EMERGENCY**. The SEOC has been activated and you are to report immediately and act per the State REP Plan."

VERIFY THAT THOSE LISTED BELOW HAVE BEEN NOTIFIED OF PRIOR ECL IN PROGRESS AND/OR CONTACT IF INITIAL NOTIFICATION, NO PREVIOUS ACTION TAKEN:

Claiborne County EMA	Hinds County EMA
Copiah County EMA	Warren County EMA
Adams County EMA	Jefferson County EMA
Tensas Parish, LA	Remaining Ingestion Pathway Counties*
LA GOHSEP	FEMA Region IV

*GGNS Ingestion Pathway Counties are: Amite, Wilkinson, Franklin, Lincoln, Simpson, Rankin, Madison, Yazoo, Sharkey, Issaquena

Message: "Mr. / Ms. _____, this is _____ calling from the Mississippi Emergency Management Agency to advise you that the Grand Gulf Nuclear Station has declared a **SITE AREA EMERGENCY**."

d. GENERAL EMERGENCY [GGNS]

(CONTACT, If No Previous Actions Taken.)

CONFIRM THAT THE INITIAL RESPONSE GROUP IS **NOTIFIED.**

FIRST RESPONSE GROUP (GE)

MSDH/EMS	MDPS/MHP	MDHS
ARC	Salvation Army	MDAC
MBAH	MSU-ES	MDMH
MSNG/MMD	MDEQ	DWFP
MDA/ED	MFC	MDOE
MS Office of the Governor		

Message: "Mr. / Ms._____, this is _____calling from the Mississippi Emergency Management Agency to advise you that the Grand Gulf Nuclear Station has declared a **GENERAL EMERGENCY**. The SEOC has been activated and you are to report immediately and act per the State REP Plan."

VERIFY THAT THOSE LISTED BELOW HAVE BEEN NOTIFIED OF PRIOR ECL IN PROGRESS AND/OR CONTACT IF INITIAL NOTIFICATION, NO PREVIOUS ACTION TAKEN:

Claiborne County EMA	Hinds County EMA
Copiah County EMA	Warren County EMA
Adams County EMA	Jefferson County EMA
Tensas Parish, LA	Remaining Ingestion Pathway Counties*
LA GOHSEP	FEMA Region IV

*GGNS Ingestion Pathway Counties are: Amite, Wilkinson, Franklin, Lincoln, Simpson, Rankin, Madison, Yazoo, Sharkey, Issaquena

Message: "Mr. / Ms._____, this is _____calling from the Mississippi Emergency Management Agency to advise you that the Grand Gulf Nuclear Station has declared a **GENERAL EMERGENCY**."

e. ABBREVIATED NOTIFICATION OF IMMINENT/PROBABLE THREAT. Should GGNS become subject to an imminent threat, a formal notification per established procedures may not be able to be completed due to the situation. If MEMA Communications receives notification by either the INFORM system, the Operational Hot Line (OHL), or by the regular telephone that GGNS is declaring an "Alert" or higher classification "due to imminent/probable threat", the

following procedure should be taken:

(1) Contact the following agencies stating the following:

"GRAND GULF NUCLEAR STATION HAS DECLARED AN _____ (Alert, Site Area Emergency, or General Emergency) **AT _____ (time) DUE TO AN IMMINENT OR PROBABLE THREAT. ADDITIONAL INFORMATION WILL FOLLOW WHEN AVAILABLE."**

____MEMA Operations Duty Officer (1-800-222-6362)

____MS Highway Patrol (MHP) (601-987-1530)

____LA Homeland Security/EP (LHS/EP) (1-225-925-7500)

____LA Dept. of Environmental Quality (LDEQ) (1-225-765-0160)

____Claiborne County Sheriff's Office (CCSO) (601-437-5161)

____Claiborne County Civil Defense (CCCD) (601-437-4684)

____Tensas Parish Sheriff's Office (TPSO) (1-318-766-3376)

____Tensas Parish Office of Emergency Preparedness (TPOEP) 1-318-766-3992

____Port Gibson Police Department (PGPD) (601-437-5101)

(2) Continue with notifications per "MEMA Communications Plan" for a GGNS event at the specified classification level by the plant (ALERT, SAE, or GE).

3. RIVER BEND STATION EMERGENCY CLASSIFICATION LEVEL NOTIFICATIONS.

a. NOTIFICATION OF UNUSUAL EVENT [RBS]

INITIAL RESPONSE GROUP (NOUE)

MEMA Director	MEMA Deputy Director
MEMA Chief Operating Officer	MEMA Preparedness Director

MEMA Operations Section Chief	MEMA Central Region Bureau Director
MSDH/DRH	MDOT
MEMA PIO	MEMA Support Services Director
MOHS	FBI

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency Management Agency calling to advise that the River Bend Nuclear Station has declared a **Notification of Unusual Event.** No action is required of you at this time. If the emergency classification level increases, you will be the notified of the necessary actions. If a Site Area Emergency is declared, you will be notified to report to the SEOC. You will be kept advised of any further developments."

b. ALERT [RBS]

(Verify If Prior ECL In Progress and/or CONTACT IF Initial Notification, No Previous Action Taken.)

CONFIRM THAT THE INITIAL RESPONSE GROUP IS **NOTIFIED.**

FIRST RESPONSE GROUP (ALERT)

MSDH/EMS	MDPS/MHP	MDHS
ARC	Salvation Army	MDAC
MBAH	MSU-ES	MDMH
MMD	MDEQ	DWFP
MDA/ED	MFC	MDE

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency Management Agency calling to advise that the River Bend Nuclear Station has declared an **ALERT.** No action is required of you at this time. If the Emergency Classification Level increases, you will be notified and advised of necessary actions."

c. SITE AREA EMERGENCY [RBS]

(Verify If Prior ECL In Progress and/or CONTACT If Initial Notification, No Previous Action Taken.)

CONFIRM THAT THE INITIAL RESPONSE GROUP IS **NOTIFIED** TO REPORT TO SEOC**.**

FIRST RESPONSE GROUP (SAE)

MSDH/EMS	MDPS/MHP	MDHS
ARC	Salvation Army	MDAC
MBAH	MSU-ED	MDMH
MMD	MDEQ	DWFP
MDA/ED	MFC	MDE

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency Management Agency calling to advise you that the River Bend Nuclear Station has declared a **SITE AREA EMERGENCY.** The SEOC is partially activated, but your agency is not required to be represented at this time. If the Site Area Emergency escalates to a General Emergency, you will be asked to report to the SEOC. You will be advised of any further developments."

VERIFY THAT THOSE LISTED BELOW HAVE BEEN NOTIFIED OF PRIOR ECL IN PROGRESS AND/OR CONTACT IF INITIAL NOTIFICATION, NO PREVIOUS ACTION TAKEN:

Adams County EMA	Franklin County EMA
Pike County EMA	Wilkinson County EMA
Amite County EMA	

Message: "Mr. / Ms. _____, this is _____ from the Mississippi Emergency Management Agency calling to advise you that the River Bend Nuclear Station has declared a **SITE AREA EMERGENCY."**

d. GENERAL EMERGENCY [RBS]

(*CONTACT, If No Previous Actions Taken.*)

CONFIRM THAT THE INITIAL RESPONSE GROUP IS **NOTIFIED.**

FIRST RESPONSE GROUP (GE)

MSDH/EMS	MDPS/MHP	MDHS
ARC	Salvation Army	MDAC
MBAH	MSU-ES	MDMH
MMD	MDEQ	DWFP
MDA/ED	MFC	MDOE

Message: "Mr. / Ms._____, this is _____ from the Mississippi Emergency Management Agency calling to advise you that the River Bend Nuclear Station has declared a **GENERAL EMERGENCY**. The SEOC has been activated and you are to report immediately and act per the State REP Plan."

VERIFY THAT THOSE LISTED BELOW HAVE BEEN NOTIFIED OF PRIOR ECL IN PROGRESS AND/OR CONTACT IF INITIAL NOTIFICATION, NO PREVIOUS ACTION TAKEN:

Adams County EMA	Franklin County EMA
Pike County EMA	Wilkinson County EMA
Amite County EMA	

Message: "Mr. / Ms._____, this is _____ from the Mississippi Emergency Management Agency calling to advise you that the River Bend Nuclear Station has declared a **GENERAL EMERGENCY.**

Annex D (Accident Assessment)

1. PURPOSE. To determine the projected and actual extent of the radiological emergency to decide what protective actions should be taken.

2. CONCEPT OF OPERATIONS.

a. General. The operator of the facility will perform an initial accident assessment as soon as possible after the incident. The Mississippi State Department of Health, Division of Radiological Health (MSDH/DRH), will verify the radiological assessment and will perform continuing accident assessment and evaluation until it is no longer required.

b. Operational Procedures.

(1) Fixed Nuclear Facilities. When an incident onsite has released radioactive materials to the environment, the operator of the fixed nuclear facility (FNF) will assess to determine the magnitude of the release and the projected dose offsite. The assessment will be classified per the Emergency Classification Levels (ECLs) outlined in the Basic Plan and the operator of the facility will notify the proper authorities and make the reports as outlined in Annex C. In the event the emergency begins at General Emergency (GE), the assessment will be classified per the Protective Action Guides. After the initial notification, the operator of the fixed nuclear facility will report changes and refinements of the assessment to the State Emergency Operations Center (SEOC). EOF access will be pre-coordinated to prevent delays of authorized ORO personnel in responding to the FNF.

(2) Local Government. The local government will have no accident assessment function. The affected local government will be kept advised of dose projections and recommended protective actions by the SEOC. Before the arrival of the MSDH/DRH RERTs to the vicinity of the fixed nuclear facility, the utility will be responsible for providing offsite radiological monitoring and making protective action recommendations to the local government and state agencies. The local government will implement the recommendations in a manner consistent with county emergency preparedness plans and procedures. The local government will ensure no impediment exists that would hinder ORO personnel and equipment from responding to the FNF. Available resources will be allocated to assisting in the evacuation process without delay.

(3) State Government. State accident assessment activities will be performed by Radiological Emergency Response Teams (RERTs) composed of personnel from state agencies. The RERT accident assessment and control element will operate from either GGNS or RBS depending upon the location of the accident. Radiological situation reports, and analytical results will be forwarded to the RAAO at the SEOC. RERT personnel will perform all offsite dose calculations at the utility's EOF. In addition to direct radiation monitoring equipment, the

radiological monitors will have air-sampling devices for evaluating airborne radioactivity levels. Responsibilities of the RERT personnel will be as follows:

(a) Radiological Accident Assessment Officer (RAAO). The MSDH/DRH Director will act as the RAAO. He will operate in the State EOC and will be responsible for decision making and the overall coordination of RERT operations. He will establish direct contact with the fixed nuclear facility's Radiological Assessment Coordinator (RAC) at the EOF to discuss the utility's protective action recommendations and verify offsite dose projections. From this information and the information received from the EOF Coordinator and RDA, the RAAO will determine the radiological consequences to offsite areas based on the magnitude of the release. If more data is needed, the RAAO will specify the type and location of additional measurements required. These measurement activities will be coordinated through the EOF Coordinator. (See Appendix 1).

(b) Emergency Operating Facility Coordinator (EOF Coordinator). This person will operate from the EOF and will be responsible for the coordination of off-site monitoring and sample collection activity, deployment of RERTs, plume tracking via FNF's plume tracker, transfer of radiological samples to the radiological laboratory for analysis, and providing the RAAO at the SEOC information concerning the FNF's PARs and offsite dose projections.

(c) Radiological Dose Assessment (RDA). This person will operate from the EOF and will be responsible for all offsite dose calculations. Dose projections will be by a computer program. The program utilized will be NRC approved on a computer normally furnished by the utility. If the computer is not available, dose projections will be made utilizing the tables and actions contained in **EPA 400/R-17/001** (*PAG Manual: Protective Action Guides and Planning Guidance Radiological Incidents*). Regulatory Guide 1.109 will be utilized in calculating direct dose projections due to deposition and that due to the ingestion exposure pathway.

(d) Radiological Emergency Response Team (RERT). Health Physicists from MSDH/DRH will act as RERT members. They will be mobile to conduct radiological monitoring as required and will report on contamination levels and dose measurements and perform environmental sampling as needed. Also, the individual team captains, in coordination with the EOF Coordinator, will be responsible for the dosimetry of emergency workers under their supervision and the evaluation of their measured exposure. MEMA will provide communications equipment for the RERTs.

(e) Emergency Environmental Sampling. The MSDH/DRH will supervise the sampling of air, surface waters, cisterns, open wells, edible agriculture commodities, milk, fish, soil, pasture grass, and animal feed. See Annex O for a map of routine environmental Sampling

Stations. Procedures are outlined in Appendix 1. The following state agencies will, when requested by the EOF Coordinator, conduct functions as follows:

- Mississippi Department of Transportation
  - Collection of designated dosimeters
  - Radiological monitoring as required to augment local monitoring.
- Department of Environmental Quality
  - Air, Water and Soil Sampling
- Mississippi State Department of Health/Division of Radiological Health
  - Water sampling of potable and non-potable water sources
  - Air sampling for particulate and radioiodine
  - Direct radiation monitoring
  - Raw milk sampling
  - Soil sampling
  - Sample analysis
- Department of Wildlife, Fisheries, and Parks
  - Fish and animal sampling
  - Water sampling of surface water
- Mississippi Department of Agriculture and Commerce
  - Carcass Sampling
  - Critical food processor, distributor and retailer sampling
- Mississippi State University-Extension Service

- Pasture feed and animal sampling

- Mississippi Board of Animal Health
  - Pasture feed and animal sampling

(f) Sample analysis.

- Radioisotopic analysis of samples collected in an affected area during a radiological emergency will be performed by the MSDH/DRH at the fixed MSDH/DRH Laboratory. In the event the number of samples is too large to allow processing expediently, provisions have been made with the EPA for assistance from their labs at Montgomery, Alabama, and Las Vegas, Nevada, to assist in the analyses. Mobile laboratories of DOE will also assist in sample analysis if needed. Reports of analytical results will be sent to the RAAO at the SEOC and the State Health Officer. Public Health orders will be issued based on the results of the analyses.
- MSDH/DRH maintains and operates a fixed radiological laboratory. The fixed radiological laboratory can be made fully operational (i.e., prepared to receive potentially contaminated samples) within 90 minutes after notification of an incident.

- To accurately determine potential dose commitments to the thyroid resulting from airborne radioiodine, all radiological monitoring teams will be equipped with air sampling devices capable of collecting radioiodine in the presence of noble gases.

- The RERTs will perform exposure rate measurements with portable survey instruments.

c. Logistics.

(1) Local Government. Radiological monitoring equipment and dosimetry for local monitors will be supplied and maintained by MEMA.

(2) State Government. Each State agency assigned responsibility for radiological monitoring; sample collection or analysis will supply and maintain its specialized equipment and modes of transportation. Basic radiological monitoring and dosimetry equipment will be furnished by MEMA. After each exercise or drill, the MSDH/DRH will inspect, inventory, and operationally check all RERT emergency response equipment. The calibration of emergency monitoring equipment utilized by the RERTs will be performed annually by the MSDH/DRH. All other radiological monitoring and dosimetry equipment used by the REP program will be maintained and annually operationally checked by MEMA.

(3) Facility Operator. Fixed nuclear facilities are required to have redundant meteorological equipment available with remote interrogation capabilities. Information derived from these capabilities shall be made available to the RAAO and/or RDA for use in accident assessment. Additionally, the operator will provide for sufficient radiological monitoring equipment for its radiological assessment teams. Meteorological information from the National Weather Service and near-site cable television will also be used by State Government Officials in accident assessment and evaluation.

d. Training.

(1) Local Government. Training in the use of radiation detection equipment will be coordinated through MEMA.

(2) State Government. Each state agency will train its personnel to accomplish assigned missions with the assistance of MSDH/DRH and MEMA.

(3) Facility Operator. The facility operator will train its personnel to accomplish assigned missions.

e. Additional Assessment and Monitoring Support.

(1) Southern Mutual Radiological Assistance Plan (SMRAP).

(a) When it is determined that an accident at a fixed nuclear facility cannot be adequately controlled with resources available to state radiological response personnel, a request will be forwarded to the Governor for the additional resources needed. The request will contain the following information:

- Description of the problem
- Type of resources needed
- Which state has the resources
- Where the resources need to be delivered
- Clear direction to an assembly point or point of delivery
- Estimated time the resources will be needed

- If resources include people, what arrangements have been made for housing, etc.

(b) If the Governor concurs with the need for assistance as requested, he will contact the Governor of the SMRAP state that has the resources and request the specified assistance.

(c) Concurrent with the above actions the MSDH/DRH's EOF Coordinator and RAAO will make informal telephone contact with radiological personnel in the SMRAP State to alert them of the pending formal request.

(2) Nuclear/Radiological Incident Annex (NRIA)

(a) The NRIA to the National Response Framework (NRF) covers any emergency that has or is expected to have, an offsite radiological impact, which could require a response, by the federal government. In the event of a radiological emergency, 20 federal agencies with various statutory responsibilities have agreed to coordinate their efforts at the emergency scene under the umbrella of the NRF to ensure that any federal involvement/response is managed, coordinated, organized, and integrated with the affected State/local government.

(b) Activation of the NRIA will occur when the NRC has been notified that a radiological emergency has occurred and that an authorized person has requested federal assistance. Mississippi authorized persons are the MSDH/DRH Director/RAAO for radiological emergency federal assistance and the MEMA Director for non-radiological emergency federal assistance.

(c) The request for federal assistance will specify the federal resources requested and the expected time of arrival at the specified fixed nuclear facility emergency.

(d) The NRIA assigns to DOE the responsibilities to provide federal offsite monitoring and assessment results to the NRC and affected State(s).

(e) The following personnel/equipment resources are available through DOE, upon activation of the NRIA and will be provided on request:

- Radiological monitoring and environmental specialists with supporting equipment.

- Aerial radiological monitoring equipment.

- Fixed and mobile laboratory support.

- Remote handling equipment.

- Technical assistance in predicting the dispersion of radioactivity into the environment.

- Medical consultation on the treatment of injuries complicated by radioactive contamination.

- Technical support for emergency public information.

- Communications with Federal response organizations.

(f) DOE established the Federal Radiological Monitoring and Assessment Center (FRMAC). Upon receipt of a request for Federal resources from authorized State personnel, the FRMAC will deploy to the Mississippi State Fairgrounds. The Fairgrounds are equipped with electrical and water infrastructure for mobile facilities and generators. It is also the location of the Mississippi Coliseum which has space and amenities for additional Federal Staff. The FRMAC provides an operational framework for coordinating all Federal offsite radiological monitoring and assessment efforts to support the NRC and State(s) request for federal assistance. This support will include:

- Providing FRMAC liaisons to the NRC and State(s).

- Gathering radiological information and data that includes:

  - Plume and deposition predictions.

  - Air and ground concentrations.

  - Deposition patterns of isotopic concentrations, exposure rates, and dose projections.

  - Isotopic concentrations of ground deposition and environmental samples (water, milk, soil, air, etc.).

  - Assurance of data quality.

  - Current meteorological conditions and weather forecasts.

- Providing the results of data collection, sample analysis, evaluations, assessments, and interpretations, as requested.

- Compiling a complete database containing all offsite radiological monitoring and sampling data and ensuring the technical integrity of the data.

- Providing technical assistance to the extent resources are available.

- Providing data to support the protective action recommendation decision-making process.

Annex D (Accident Assessment)
Appendix 1 (Emergency Sampling Procedures)

In responding to a radiological emergency or nuclear accident, the following guidelines will be used for environmental sampling priorities:

CONTINUOUS SAMPLING

Air Sample Stations	As soon as possible after a reported accident at a fixed nuclear facility, remove and change all routine air particulate and charcoal filters. Be prepared to change air samplers daily. Activate all standby air sampling stations (ERAMS/RadNet).
Precipitation Collectors	As soon as possible after a reported accident at a fixed nuclear facility, collect precipitation at all collection stations. Record the amount of precipitation.

GRAB SAMPLES

Surface Water Samples	As soon as possible after a reported accident at a fixed nuclear facility, collect at least a one-gallon surface water sample from at least two downstream locations. Samples may have to be taken every two to four hours for the first 24 hours following a release. Collect surface water samples from at least one upstream location. Prepare for large volume sampling and composites.
POTABLE WATER SAMPLES	As soon as possible after a reported accident at a fixed nuclear facility, collect at least a one-gallon drinking water sample from all the potable water sample stations.

RAW MILK SAMPLING	Gaseous releases may be the critical pathway. As soon as possible, collect at least a one-gallon sample of raw milk at each potentially affected dairy. Sample the dairy every two days. Sample water from the source used to water livestock. Sample pasture grass and/or feed.
VEGETATION AND CROPS	Obtain samples of critical food crops and other vegetation such as small gardens (i.e., those for individual use) as soon as possible after the plume has passed.
AIR SAMPLING	As soon as possible initiate air sampling of the plume (particulate and gases).
PARTICULATE DEPOSITION	As soon as possible collect samples of filter media (i.e., air intakes on automobile or operating air conditioners), swipes of vehicle (esp. those of evacuees) surfaces, and roadways.
DIRECT RADIATION MEASUREMENTS	Take direct radiation measurements of samples and the environs at every sample point when possible. Take other specific measurements as directed.

Annex E (Protective Actions)

1. PURPOSE. To minimize exposure to the public from a radiological accident at a fixed nuclear facility by identifying the protective actions available and the procedures necessary to implement those protective actions.

2. CONCEPT OF OPERATIONS.

a. General. An operational fixed nuclear facility has the potential for certain types of radiological accidents. The U.S. EPA has established *EPA 400/R-17/001* - "*PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents*" as a set of Protective Action Guides (PAGs). These guides were established for whole body beta-gamma radiation exposure and exposure of the thyroid gland due to the presence of radioactive iodine. Mechanisms for protecting the public (including critical segments of the public such as children, institutionally confined persons, and pregnant women) are presented in this Annex. For planning purposes, the actions stated for a given PAG are considered mandatory; however, under real accident conditions, the values of guidance are subject to unanticipated conditions and/or constraints and judgment is to be exercised before initiating a particular action.

For each PAG there is a corresponding group of protective actions that are necessary for the protection of the general public and/or emergency workers. Protective actions range from taking no action to the evacuation of affected areas. The appropriate protective actions for the general public, special needs populations, and emergency workers will be recommended by MSDH/DRH to MEMA and local government. Implementation of the protective action is the responsibility of MEMA, other state agencies, and local government.

b. Protective Action. Protective action will be outlined according to the emergency classification. Standard, Extended, and Rapidly Progressing Severe Accident Protective Actions, incorporating the recommendations outlined in NUREG-0654 Supplement 3 guidance, can be found on page E-9 and E-10.

(1) Notification of Unusual Event. Both State and local governments are notified by the facility utilizing the Operational Hot Line. Recipients of the message should inform those officials designated in their procedures, then standby until closeout or escalation.

(2) Alert. State and local EOCs are activated and all agencies, including school districts/departments, are notified. GGNS will activate the Joint Information Center (JIC) and State and local government public information staff will report. At the local level, some precautionary actions may take place, depending on plant conditions as reported in the initial notification and any follow-up notification. These include closing recreational areas determining

special needs transportation requirements and alerting school bus drivers to be on standby for *precautionary transfers*.

(3) Site Area Emergency. All State and local officials and agencies will be notified and directed to report to their respective EOCs if they have not already done so. The MSDH/DRH will activate the field monitoring teams (FMTs) and deploy them to the field for accident assessment operations. The local government may be advised to shelter the general public in the downwind areas. *The **precautionary transfer** of school children and the special needs population will be implemented by the risk county*. Local traffic and access control points will be activated. MDOT and MHP will activate their personnel and prepare to man the state traffic control points.

NOTE: Should any protective action for the general public be implemented, the siren system will be activated and an EAS message will be broadcast within 15 minutes of the decision to implement a protective action. For hostile action-based events at the Grand Gulf Nuclear Plant protective actions may be modified by the MEMA Executive Director based on current physical security and radiological conditions at the plant. These actions will be coordinated between the State and Claiborne County.

(4) General Emergency. All State and local officials will be notified and directed to report to their respective EOCs if they have not already done so. MSDH/DRH will continue to assess the offsite radiological dose, either projected or actual. Recommendations from the utility and the MSDH/DRH will be evaluated and a protective action decision will be made by the MEMA Director, the MSDH/DRH Director, and the Port Gibson/Claiborne County Emergency Management Director. Once the decision is made, the MEMA Director will initiate the necessary coordination with the local government to ensure that the sirens are activated and the appropriate EAS message is broadcast within 15 minutes.

The general population within the affected protective action areas will be directed to either evacuate or shelter. Appropriate traffic and access control points will be activated. Periodic joint media briefings will be conducted at the JIC to keep the public informed of the status of the plant. If the public is evacuated, they will be advised to go to designated reception centers outside the Plume Exposure Pathway EPZ in Vicksburg, Utica, Hazlehurst, or Natchez. At the reception centers they will be monitored and, if necessary, decontaminated. Following this, evacuees may be taken or directed to shelter facilities, if needed.

Protective Action Recommendations:

Standard Protective Action Recommendation	Extended Protective Action Recommendation
Standard PAR EVACUATE: 2 Miles All Sectors And EVACUATE: 5 Miles Downwind Sectors And Monitor and Prepare: Remainder of 10 Mile Emergency Planning Zone (EPZ) with the exception of areas previously evacuated. And Consider prophylactic use of potassium Iodide in accordance with State Plans	**Extended PAR** EVACUATE: 2 Miles All Sectors And EVACUATE: 10 Miles Downwind Sectors And Monitor and Prepare: Remainder of 10 Mile Emergency Planning Zone (EPZ) with the exception of areas previously evacuated. And Consider prophylactic use of potassium Iodide in accordance with State Plans
Impediments to Evacuation Potential Impediments include: 1. Evacuation support not in place 2. Hostile Action 3. Adverse Weather **Grand Gulf and the Off-site response organizations will agree in advance which impediments should be considered when issuing PAR's**	

Rapidly Progressing Severe Accident PAR:

Condition	Protective Action Recommendation
Rapidly Progressing Severe Accident	**RPSA PAR** EVACUATE: 0-2-mile radius And EVACUATE: 2-10 miles Downwind And Monitor and Prepare: Remainder of 10 Mile Emergency Planning Zone (EPZ)

c. Recovery. Recovery is the overall process of reducing radiation in the environment to acceptable levels for normal daily living. Following the emergency, State and Federal government officials will identify the types and levels of radioactive contamination. They may need to take samples of air, water, soil, crops, and animal products from farms or businesses. They will provide instructions and assistance in decontaminating animals, food, and property if such actions are necessary. Contaminated food will be isolated to prevent its introduction into the marketplace. Government officials will determine whether condemnation and disposal are appropriate. Recovery may involve any of the following protective actions:

(1) Re-entry. Reentry is the temporary entry, under controlled conditions, into a restricted, contaminated area, in all probability within the 10-mile radius of the fixed nuclear facility. If a person has been evacuated from their area, they may be allowed to return temporarily to their property when conditions permit. Government officials will advise them through the Emergency Alert System (EAS) or other official means if a decision to permit reentry is made. They will receive specific instructions on routes to use and safety precautions to take. Reentry will allow them to perform such vital activities as milking, watering, and feeding pets and farm animals.

(2) Return. Return refers to those areas where previously evacuated persons will be allowed to reoccupy/return based upon State and Federal environmental sampling teams have identified that there is **no** radioactive contamination present.

(3) Relocation. The PAGs for relocation are intended for use in establishing the boundary

of a relocation area within an area where radioactive materials have been deposited. The relocation PAGs have been established at a level that will provide adequate protection for the general population, including higher risk groups such as children and fetuses. People residing in contaminated areas outside the relocation area will be at some risk from radiation dose. Therefore, guidance on the reduction of dose during the first year to residents outside this zone is also provided. Monitoring and simple dose reduction efforts are recommended in these areas to reduce doses to the extent practical. Such actions are unlikely to be practical where the dose reduction achieved is less than 10 percent.

Affected populations may perceive that intermediate phase protective actions are not consistent with those taken in the early phase. Early-phase decisions on sheltering-in-place and evacuation may have been implemented before verification of the path of the plume. Therefore, some people may have been evacuated from areas where validated doses are much lower than were projected. Others who were in the path of the plume may have been sheltered or not protected at all. During the intermediate phase of the response, dose projections may be revised based on environmental measurements. People should be relocated from areas where the projected dose exceeds the PAG for relocation without regard to prior evacuation status.

(a) Areas Affected by Different Protective Actions. Figure E-1 provides a generalized example of the areas affected by different protective actions. Area 1 represents the plume deposition area. (In reality, variations in meteorological conditions would almost certainly produce a more complicated shape, but the same principles would apply.)

In situations such as an NPP accident, where the early warning is given before a release of radioactive materials, people may already have been evacuated from Area 2 and sheltered in Area 3. People who have been evacuated from Area 2 or sheltered in Area 3 may go home if environmental monitoring verifies that their residences are outside the plume deposition area (Area 1).

Area 4 is the relocation area where projected doses are equal to or greater than the relocation PAG. People residing just outside the boundary of the relocation area may receive a dose approaching the PAG for relocation if decontamination or other dose reduction efforts are not implemented.

Area 1, except for the relocation area, represents the area of contamination that may continue to be occupied by the general public during the intermediate phase. Nevertheless, there will be contamination levels in this area that will require continued monitoring and dose reduction efforts other than relocation. Incident-specific levels below the PAGs may be used to control exposure to contamination. The relative positions of the boundaries shown in Figure E-1 depend on areas evacuated and sheltered and the radiological and meteorological characteristics of the release. For example, Area 4 (the relocation area) could fall entirely inside Area 2 (area evacuated), so that the

only people to be relocated would be those residing in Area 4 who were either missed in the evacuation process or who, because of mobility constraints for their evacuation, had remained sheltered-in-place during plume passage.

Establishing the boundary of a relocation area creates three groups of affected people:

- People who have already been evacuated from an area that is now designated as a relocation area and who now must be assigned relocation status.

- People who were not previously evacuated, but who reside inside the relocation area and should now relocate.

- People who were previously evacuated but reside outside the relocation area and may now return home. A staged and deliberate return is recommended.

Small adjustments to the boundary of the relocation area established based on the PAG may be justified based on ease of implementation. For example, the use of a convenient natural boundary could be a logical reason for the adjustment of the relocation area. However, such decisions should be supported by demonstration that exposure rates to people not relocated can be promptly reduced by methods other than relocation to meet the PAG, as well as the longer-term dose guidelines addressed in Section 4.4.

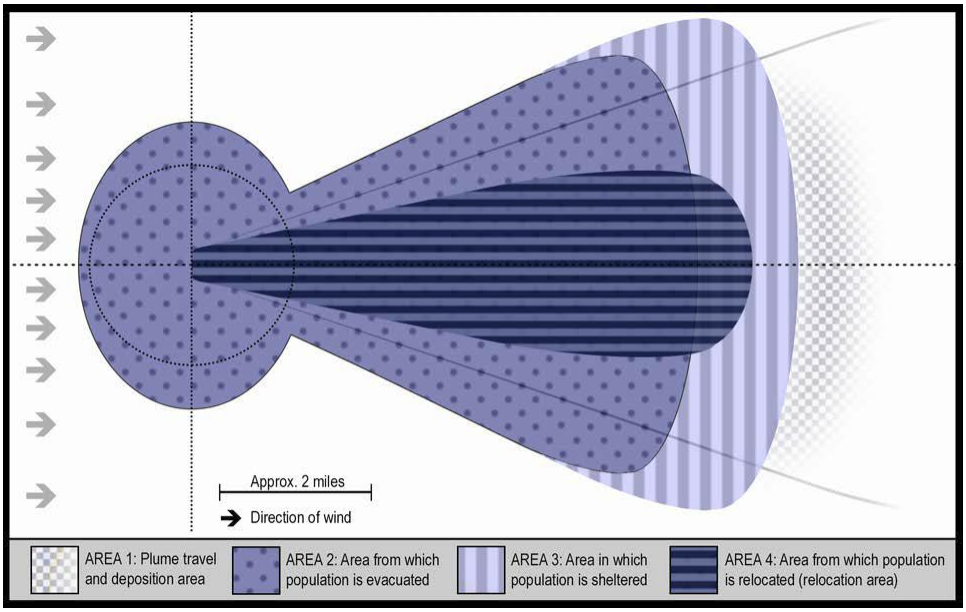

Figure E-1. Generalized Protective Action Areas for NPP Incident

The relocation PAGs apply principally to personal residences but may impact other facilities as well. For example, it could impact work locations, hospitals, and parklands as well as the use of

highways and other transportation facilities. For each type of facility, the occupancy time of individuals should be considered to determine the criteria for using a facility or area. It might be necessary to avoid continuous use of homes in an area because radiation levels are too high. However, a factory or office building in the same area could be used because occupancy times are shorter. Similarly, a highway could be used at the time spent at home.

(b) Priorities. In most cases, protective actions during the intermediate phase will be carried out over a relatively long period (e.g., months). Setting priorities will be important, especially when the affected area is so large that it is impractical to relocate members of the public from areas that barely exceed the relocation PAGs. The following priorities are appropriate:

- First, protect all people from doses that could cause acute health effects from all exposure pathways, including previous exposure to the plume.

- Conduct radiological surveys to verify or adjust estimates of radiological impacts.

- Recommend that affected people reduce their exposures by using simple decontamination techniques and remaining indoors.

(c) Sequence of Events. The high-priority decisions on whether to relocate people from high exposure rate areas require exposure rate measurements and dose analyses. Monitoring and dose assessment will be an ongoing process, with priority given to the areas with the highest exposure rates.

Following the passage of the airborne plume, several tasks must be accomplished for the timely protection of the public. The general sequence of events is itemized below, but the time frames will overlap.

- Determine the areas where the projected first-year dose will exceed the 2 rem (20 mSv) relocation PAG and relocate people from those areas, with priority given to people in the highest exposure rate areas.

- Allow previously evacuated people to return as quickly as possible to areas where field measurements indicate that exposure rates are near normal background levels. If there is a possibility that particles from high deposition areas could drift into the occupied areas, establish a buffer zone to restrict residential use until radiological measurements and assessments confirm that it is no longer necessary. Buffer zones are set with the understanding that conservatism is inherent in the PAGs.

- Based on isodose-rate boundary, assign any evacuees who reside within the relocation area to be relocated. Evacuated people whose residence is in the area between the boundary of the plume deposition and the boundary to the relocation area may return gradually as dose projections allow.

- Evaluate the dose reduction effectiveness of simple decontamination techniques and sheltering-in-place in response to exposure from partial occupancy of residences and workplaces. The results of these evaluations may influence recommendations for reducing exposure rates for people who are not relocated from areas near, but outside, the relocation area.

- Control access to and egress from the relocation area. This would be accomplished through control points at roadway accesses to the relocation area.

- Establish monitoring and decontamination stations to support control of the relocation area.

- Implement simple decontamination techniques in contaminated areas outside the relocation area, giving priority to areas with higher exposure rates.

- Collect data needed to establish long-term radiation protection criteria for decontamination and dose reduction and data to determine the effectiveness of various decontamination or other dose reduction techniques.

- Begin operations to clean up and recover contaminated property in the relocation area.

- If not already done, evaluate whether foods grown or produced within the plume deposition area need to be interdicted per the FDA PAGs and evaluate drinking water systems within the plume deposition area. Guide planting or harvesting specific agricultural products.

(d) Establishment of Isodose-Rate Lines. As soon as federal or other assistance is available for aerial and ground monitoring, a concentrated effort should begin to establish isodose-rate lines on maps and identify boundaries of the relocation area. Standard maps should be developed on which all response organizations would record monitoring data. Records on monitoring and decontamination of the public and workers should also be collected.

Aerial monitoring can be used to collect data for establishing general patterns of radiation exposure rates and may form the primary basis for the development of dose lines out to the limit of aerial detectability.

Initially, during the early phase, detectability is limited to exposure rate changes of a few times natural background levels. Later during the intermediate phase, more sensitive measurements detect levels of radioactivity that are a small fraction of the natural background. Periodic air sample measurements will also be needed to verify the contribution to the dose from the inhalation of resuspended materials.

Gamma exposure rates measured at approximately three feet (one meter) will vary within a very small area because different surfaces have different deposition rates (e.g., smooth surfaces versus heavy vegetation). Rinsing or precipitation could also reduce levels in some areas and raise levels in others (e.g., where runoff settles). In general, where exposure rates vary within designated areas, dose projections should be estimated using an appropriate average exposure rate.

(4) MEMA SEOC ESF #6 will coordinate all state efforts to provide sheltering, feeding, and other human needs following a catastrophic earthquake, hurricane, or other significant disaster requiring state mass care assistance.

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Annex E (Protective Actions)
Appendix 1 (Summary Table for PAGs, Guidelines, and Planning Guidance for Radiological Incidents)

Phase	Protective Action Recommendation	PAG, Guideline, or Planning Guidance
Early Phase	Sheltering-in-place or evacuation of the public[b]	**PAG**: 1 to 5 rem (10 to 50 mSv) projected dose over four days[c]
	Supplementary administration of prophylactic drugs – KI[d]	**PAG**: 5 rem (50 mSv) projected child thyroid dose[e] from exposure to radioactive iodine
	Limit emergency worker exposure (total dose incurred over entire response)	**Guideline**: 5 rem (50 mSv)/year (or greater under exceptional circumstances)[f]
Intermediate Phase	Relocation of the public	**PAG**: ≥ 2 rem (20 mSv) projected dose[c] in the first year 0.5 rem (5 mSv)/year projected dose in the second and subsequent years
	Apply simple dose reduction techniques	**Guideline**: < 2 rem (20 mSv) projected dose[c] in the first year
	Food interdiction[g]	**PAG**: 0.5 rem (5 mSv)/year projected whole body dose, or 5 rem (50 mSv)/year to any individual organ or tissue, whichever is limiting
	Drinking water	**PAG:** 100 mrem (1 mSv or 0.1 rem) projected dose, for one year, to the most sensitive populations (e.g., infants, children, pregnant women and nursing women); 500 mrem (5 mSv or 0.5 rem) projected dose, for one year, to the general population
	Limit emergency worker exposure (total dose incurred over entire response)	**Guideline**: 5 rem (50 mSv)/year
	Reentry	**Guideline**: Operational Guidelines[h] (stay times and concentrations) for specific reentry activities (see Section 4.5)
Late Phase	Cleanup[i]	**Planning Guidance**: Brief description of planning process (see Section 5.1)
	Waste Disposal	**Planning Guidance**: Brief description of planning process (see Section 5.2)

[a] This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

[b] Should begin at 1 rem (10 mSv); take whichever action (or combination of actions) that results in the lowest exposure for the majority of the population. Sheltering may begin at lower levels if advantageous.

[c] Projected dose is the sum of the effective dose from external radiation exposure (e.g., groundshine and plume submersion) and the committed effective dose from inhaled radioactive material.

Note: Footnotes continued on next page

[d] Provides thyroid protection from radioactive iodines only. See the complete 2001 FDA guidance, "Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies" (FDA 2001). Further information is also available in "KI in Radiation Emergencies – Questions and Answers" (FDA 2002), and "Frequently Asked Questions on Potassium Iodide (KI)." For information on radiological prophylactics and treatment other than KI, refer to http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm063807.htm, https://www.emergency.cdc.gov/radiation, and www.orau.gov/reacts.

[e] Thyroid dose. See Section 1.4.2. The one-year old age group is expected to receive the largest dose to the thyroid from exposure to radioactive iodine. Therefore, it is recommended that the one-year old age group is considered when considering the administration of prophylactic KI.

[f] When radiation control options are not available, or, due to the magnitude of the incident, are not sufficient, doses to emergency workers above 5 rem (50 mSv) may be unavoidable and are generally approved by competent authority. For further discussion see Chapter 3, Section 3.1.2. Each emergency worker should be fully informed of the risks of exposure they may experience and trained, to the extent feasible, on actions to be taken. Each emergency worker should make an informed decision as to how much radiation risk they are willing to accept to save lives.

[g] For more information on food and animal feeds guidance, the complete FDA guidance (FDA 1998) may be found at http://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM094513.pdf.

[h] For extensive technical and practical implementation information please see "Preliminary Report on Operational Guidelines Developed for Use in Emergency Preparedness and Response to a Radiological Dispersal Device Incident" (DOE 2009).

[i] This cleanup process does not rely on and does not affect any authority, including the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9601 et seq. and the National Contingency Plan (NCP), 40 CFR Part 300. This document expresses no view as to the availability of legal authority to implement this process in any particular situation.

Annex E (Protective Actions)
Appendix 2 (PAGs and Protective Actions for the Early Phase of a Radiological Incident)

Protective Action Recommendation	**PAG**	**Comments**
Sheltering-in-place or evacuation of the public[b]	**PAG**: 1 to 5 rem (10 to 50 mSv) projected dose over four days[c]	Evacuation (or, for some situations, sheltering-in-place) should be initiated when projected dose is 1 rem (10 mSv).
Supplementary administration of prophylactic drugs – KI[d]	**PAG**: 5 rem (50 mSv) projected child thyroid dose[e] from exposure to radioactive iodine	KI is most effective if taken prior to exposure. May require approval of state medical officials (or in accordance with established emergency plans).

[a] This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

[b] Should begin at 1 rem (10 mSv) if advantageous except when practical or safety considerations warrant using 5 rem (50 mSv); take whichever action (or combination of actions) that results in the lowest exposure for the majority of the population. Sheltering may begin at lower levels if advantageous.

[c] Projected dose is the sum of the effective dose from external radiation exposure (e.g., groundshine and plume submersion) and the committed effective dose from inhaled radioactive material.

[d] Provides thyroid protection from radioactive iodines only. See the complete 2001 FDA guidance, "Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies" (FDA 2001). Further information is also available in "KI in Radiation Emergencies – Questions and Answers" (FDA 2002), and "Frequently Asked Questions on Potassium Iodide (KI)."
For information on radiological prophylactics and treatment other than KI, refer to http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm063807.htm, https://www.emergency.cdc.gov/radiation, and www.orau.gov/reacts.

[e] Thyroid dose. See Section 1.4.2. The one-year old age group is expected to receive the largest dose to the thyroid from exposure to radioactive iodine. Therefore, it is recommended that the one-year old age group is considered when considering the administration of prophylactic KI.

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Annex E (Protective Actions)
Appendix 3 (Emergency Worker Guidelines)

Guideline	Activity	Condition
5 rem (50 mSv)	All occupational exposures	All reasonably achievable actions have been taken to minimize dose.
10 rem (100 mSv)[a]	Protecting critical infrastructure necessary for public welfare (e.g., a power plant)	Exceeding 5 rem (50 mSv) unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
25 rem (250 mSv)[b]	Lifesaving or protection of large populations	Exceeding 5 rem (50 mSv) unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
>25 rem (250 mSv)	Lifesaving or protection of large populations	All conditions above and only for people fully aware of the risks involved (see Tables 3-2 and 3-3)

[a] For potential doses >5 rem (50 mSv), medical monitoring programs should be considered.

[b] In the case of a very large incident, such as an IND, incident commanders may need to consider raising the property and lifesaving emergency worker guidelines to prevent further loss of life and massive spread of destruction.

This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

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Annex F (Evacuation)

1. PURPOSE. To provide for the orderly evacuation of all or some portion of the general public in the event of an emergency at Grand Gulf Nuclear Station (GGNS) that results in a potential or actual radiological release exceeding EPA PAGs.

2. CONCEPT OF OPERATIONS.

a. General. Evacuation may be ordered by the Governor upon the recommendation of the MSDH/DRH Director and MEMA Director. This decision will be made after careful deliberation and coordination with Claiborne County officials. The sirens will be activated at a prescribed time, followed by an EAS message providing instructions to the affected protective action areas. While local government has the primary responsibility for implementing the evacuation, the state will provide resources upon request and assist in the operation.

b. Organization and Functions.

(1) The state command/control/coordination chart is in Annex A in Appendix 1. The state functional matrix is in Annex A in Appendix 2. The Port Gibson/Claiborne County Radiological Emergency Preparedness Plan outlines the local officials by title that are responsible for implementing protective actions when directed.

(2) The development of this Annex for the MREPP is the responsibility of MEMA. Entergy Operations, Inc. has contracted for and produced as Appendix E of the GGNS Emergency Plan, an Evacuation Time Estimate. Parts of this study can be found in this Annex in Appendix 4.

c. Alert and Notification, Communications and Emergency Facilities. The Alert and Notification System is discussed in detail in *Annex C (Communications)* are outlined in *Annex B (Emergency Facilities)* are contained in Annex A.

d. Reception Centers. All evacuees are asked to report directly to their respective Reception Center to register when ordered to evacuate. There are four Reception Centers identified in the GGNS Emergency Public Information Brochure. Detailed reception center procedures can be found in each respective host county REP Plan (See Appendix 5, this Annex).

(1) Sherman Avenue Elementary School (until 31 December 2020)
2145 Sherman Avenue
Vicksburg, MS

Warren Central High School (After 1 January 2021)
1000 Hwy 27
Vicksburg, MS

Backup – Beechwood Elementary School
999 Hwy 27
Vicksburg, MS

(2) Louis Gunning Safe Room
323 Liberty Road
Natchez, MS

Backup – Natchez High School Gym
319 Sergeant Prentiss Drive
Natchez, MS

(3) Joe L. Johnson Safe Room
1060 Epps Lane
Hazlehurst, MS

Backup – Hazlehurst Middle School
112 School Drive
Hazlehurst, MS

(4) Hinds Community College, Utica Campus
Hinds County
Utica, MS

Backup – Unidentified at this time (will utilize SMAC agreements with other county jurisdictions.

e. Shelter Facilities. For those evacuees reporting to Reception Centers requiring temporary shelter, the following shelter facilities have been designated. Detailed shelter facility procedures can be found in each respective host county REP Plan. (See Appendix 5, this Annex)

(1) Warren County, Vicksburg, MS
Primary - Warren Central High School
Backup - Beechwood Elementary

(2) Adams County, Natchez, MS
Primary – Steckler Building (Natchez High School Campus)
Backup - Natchez High School Gym

(3) Copiah County, Hazlehurst, MS
Primary – Joe L. Johnson Safe Room.
Backup – Antioch Missionary Baptist Church

(4) Hinds County, Raymond, MS
Primary - Hinds Community College, Raymond Campus
Backup - Hinds County Public Schools will be made available, as needed.

f. Access and Functional Needs Facilities. The method of transportation of mobility-impaired people and Access and Functional Needs populations is detailed in the Claiborne County REP Plan. Support transportation such as buses and ambulances are available in neighboring communities such as Natchez and Vicksburg. Letters of Agreement (LOA) with these supporting resources are included in the above-referenced plan. If hospitalization is required, the Merit Health River Region in Warren County will support the evacuation.

g. Medical and Public Health Facility Evacuation. The Patient's Choice Hospital in Port Gibson is a 32-bed hospital with an average in-patient load of 5 to 8 people. Arrangements have been made to transport these patients to the Natchez Regional Hospital.

There is one active nursing home with approximately 60 beds and one assisted living facility with approximately 68 beds in Claiborne County within the 10-mile EPZ. Arrangements have been made to transport these people to Natchez Regional Medical Center in Natchez, Adams County.

h. Evacuation Travel.

(1) The Port Gibson/Claiborne County Civil Defense Director is responsible for coordinating all public transportation resources required for use in an evacuation.

(2) Evacuation routes for Claiborne County are described in narrative form in the GGNS Emergency Public Information Calendar and are listed in Appendix 2, this Annex.

(3) To provide for the efficient control of evacuee traffic in the event of an emergency at the FNF, the traffic management concepts of Traffic Control and Access Control are used (See Appendix 6, this Annex).

(a) Traffic Control is the efficient movement of traffic through a specific area.

(b) Access Control is the discouragement of unauthorized people from entering a specific area.

i. Public Safety.

(1) The Claiborne County Fire Department will provide fire services during the evacuation period.

(2) The Claiborne County Sheriff's Office and the Port Gibson Police Department supplemented by the Mississippi Highway Patrol will provide for law and order and provide traffic and access control during the evacuation period.

(3) The Claiborne County Road Management Department will assist with traffic and access control augmented by the Mississippi Department of Transportation during the evacuation period.

(4) Any prisoners in the Claiborne County Jail will be transported by deputies to the Warren County Jail at Site Area Emergency ECL.

j. GGNS Onsite Evacuation. An evacuation of GGNS onsite personnel could be ordered at either an Alert, SAE, or GE, based on plant conditions. GGNS onsite personnel are to follow prescribed evacuation routes out of the area as outlined in the GGNS Emergency Plan. Provisions are made for consideration of weather conditions, traffic, and/or radiological impediments. No assistance is required by MEMA to conduct licensee evacuation.

k. Household Pet and Service Animal Evacuation. See DRAFT Louisiana Department of Agriculture and Forestry / Mississippi Board of Animal Health, Household Pet and Service Animal Reception and Care Center Operating Guide for a Radiological Incident – Base Plan and Appendices.

l. Radiological Exposure Control. Radiological exposure control is covered in Annex G.

m. Public Information Education Program. Public information and education are discussed in Annex J.

n. Maps. Maps specific to Annex F are found in Annex O.

Annex F (Evacuation)
Appendix 1 (Protective Action Areas for Claiborne County)

1. Protective Action Area 1 includes the GGNS site and is that area between the Big Black River and Bayou Pierre west of Old Grand Gulf Road.

2. Protective Action Area 2A includes the area between the Big Black River and Bayou Pierre west of Highway 61 to Old Grand Gulf Road.

3. Protective Action Area 2B includes the area between the Big Black River and Bayou Pierre east of Highway 61.

4. Protective Action Area 3A includes the area between Bayou Pierre and Little Bayou Pierre west of the Natchez Trace Parkway.

5. Protective Action Area 3B includes the area between Bayou Pierre and Little Bayou Pierre east of the Natchez Trace Parkway.

6. Protective Action Area 4A includes the area between Little Bayou Pierre and Widows Creek south and east of Bayou Pierre to the Natchez Trace Parkway, including the town of Port Gibson.

7. Protective Action Area 4B includes the area between Little Bayou Pierre, south and east of the Natchez Trace Parkway and north of Gordon Station Road.

8. Protective Action Area 5A includes the area between Bayou Pierre and Russum-Westside Road east to Widows Creek.

9. Protective Action Area 5B includes the area south of the Russum-Westside Road from the Ferry Road east to Gordon Station Road.

10. Protective Action Area 6 includes all of Alcorn State University.

11. Protective Action Area 7 includes the area north of the Big Black River and east of the Mississippi River.

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Annex F (Evacuation)
Appendix 2 (Claiborne County Evacuation Routes)

Evacuation signs have been placed in 135 locations within the Protective Action Areas. The signs say, "Evacuation Route" and show a directional arrow. They are 18" in diameter.

A narrative description of the GGNS evacuation routes are listed below:

1. Protective Action Area 1 take US Highway 61 North to Vicksburg (Warren County). Proceed to the reception center at Warren Central High School.

2. Protective Action Areas 2A and 2B take US Highway 61 North or Mississippi Route 462 East to Vicksburg (Warren County). Proceed to the reception center at Warren Central High School.

3. Protective Action Areas 3A and 3B take Mississippi Highway 18 East to Utica (Hinds County). Proceed to the reception center at Hinds Community College - Utica Campus.

4. Protective Action Areas 4A and 4B take Mississippi Route 547 South to Mississippi Highway 28 East to Hazlehurst (Copiah County) then go North on Interstate 55 to Exit 65, go right, then turn left onto Epps Lane and proceed to the reception center at Joe L Johnson Safe Room in Gallman, MS.

5. Protective Action Areas 5A and 5B take Mississippi Route 552 East to US Highway 61 South to Natchez (Adams County). Proceed to the reception center at Louis Gunning Safe Room.

6. Protective Action Area 6 takes Mississippi Route 552 east to US Highway 61 South to Natchez (Adams County). Proceed to the reception center at Louis Gunning Safe Room.

7. Protective Action Area 7 take US Highway 61 North to Vicksburg (Warren County). Proceed to the reception center at Warren Central High School.

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Annex F (Evacuation)
Appendix 3 (Estimated Evacuee Population by Protective Action Area)

AREA	PERMANENT RESIDENT POPULATION	ESTIMATED TRANSIENT POPULATION*	ESTIMATED EVACUEE POPULATION**	EVACUATE TO
1	191	800	991	Warren County
2A	216	150	366	Warren County
2B	87	110	197	Warren County
3A	950	75	1025	Hinds County
3B	300	100	400	Hinds County
4A	2491	75	2566	Copiah County
4B	253	65	318	Copiah County
5A	234	120	354	Adams County
5B	223	100	323	Adams County
6	136	2919	3055	Adams County
7	0	150	150	Warren County
TOTALS	5,081	4,799	10,048	

* Transient population includes recreational areas, hunting and fishing camps, GGNS workforce, and Alcorn University students. Numbers represent an average of seasonal fluctuations.

** Combined total of both Resident and Estimated Transient Populations.

[1]Populations provided by Claiborne County as of May 2012.

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Annex F (Evacuation)
Appendix 4 (GGNS Evacuation Time Estimate Study)

The following has been taken in part from the GGNS Emergency Plan, Appendix E -Evacuation Time Estimates for the GGNS Plume Exposure Pathway EPZ, March 1986**.** A subsequent Demographic Study conducted during the fall of 2018 confirmed that the population figures listed in the 1986 Evacuation Time Estimate are still valid.

1. EVACUATION ANALYSIS AREAS. Under NUREG-0654, FEMA REP 1, Rev. 2 guidance, evacuation time estimates have been prepared for various geographic areas with the Grand Gulf Nuclear Station EPZ, and for the entire EPZ. The evacuation analysis area listed below:

Analysis Area	Sector/Distance	Protective Action Area(s)
1	360°, 0-2 miles	1
2	90° NE, 0-5 miles	1, 2A
3	90° SE, 0-5 miles	1, 3A, 4A, 5A
4	90° NE, 0-10 miles	1, 2A, 2B, 7
5	90° SE, 0-10 miles	1, 3A, 3B, 4A, 4B, 5A, 5B, 6
6	90° NW, 0-10 miles	1, 12, 8, 9
7	90° SW, 0-10 miles	1, 12, 10, 11
8	Entire EPZ	All Areas

Time estimates have been prepared for a general evacuation scenario for each of these analysis areas for (1) Weekday Fair Weather Conditions, (2) Weeknight Fair Weather Conditions, (3) Weekend Fair Weather Conditions, and (4) Weekday Adverse Weather Conditions.

2. INITIAL NOTIFICATION. The EPZ surrounding the Grand Gulf Nuclear Station has an alerting and notification system design consistent with NUREG-0654 Rev. 1 guidelines. In the event of the need to evacuate, this system will be used to alert the population at risk to turn on their radios and television sets. For this study, it was assumed that notification messages will commence on the designated television and radio stations virtually immediately and that within 15 minutes the population within 10 miles of the plant will have received an informational or instructional message. The message will contain protective action recommendations and, if necessary, will describe the need to evacuate, the evacuation routes, and the reception center locations.

If evacuation is deemed necessary, the timing of the order to evacuate and notification measures will be controlled by the State and local emergency management officials. They may choose to alert and mobilize an emergency response workforce to control and expedite evacuation before the evacuation

order.

3. ANALYSIS OF EVACUATION TIMES. Evacuation time estimates for each of the evacuation analysis areas are presented in Tab A. These estimates represent the time required to **empty** each of the analysis areas, including the time required for initial notification. The various evacuation scenarios represent peak populations that would occur during summer or fall periods. The evacuation times, however, would also be representative of early spring and winter conditions since the preparation time associated with the transport dependent permanent population is the primary factor influencing the total EPZ evacuation time.

It is assumed that any home-to-work travel within the EPZ takes place during the previously identified mobilization and preparation periods. It is also assumed that the actual evacuation begins with the departures from the school, workplace, recreation area, or residence at which they are located when the evacuation order is issued.

A summary of the simulated evacuations for each of the analysis is as follows:

a. Analysis Area 1 (Evacuation of Protective Action Area 1). For Analysis Area 1 (360°, 0-2-mile Evacuation), a maximum of 135 minutes would be required to evacuate the population under fair weather conditions. Most of the vehicles evacuating this area are associated with the Grand Gulf Nuclear Station employment. However, the preparation/mobilization times associated with the transport dependent residents, which take up to 135 minutes, are the major influence on the evacuation time. During adverse weather conditions, evacuation of Protective Action Area 1 could be completed within 140 minutes.

b. Analysis Area 2 (Evacuation of Protective Action Areas 1 and 2A). Analysis Area 2 represents evacuation of the 90°, northeast sector, from 0 to approximately 5 miles. For all fair-weather conditions, evacuation of this area can be completed within 140 minutes. Under conditions of adverse weather, evacuation of Areas 1 and 2A will take approximately 145 minutes, due to reduced roadway capacities. The preparation and mobilization times are the most significant factors in determining the total time required to evacuate the area.

c. Analysis Area 3 (Evacuation of Protective Action Areas 1, 3A, 4A and 5A. Analysis Area 3 (90°, Southeast Sector, 0 to 5 miles) includes evacuation of the town of Port Gibson and a significantly higher population than Analysis Areas 1 and 2. The maximum time required to evacuate this area under all fair-weather conditions is 140 minutes. Any queuing that may be experienced on network roadways dissipates well before all vehicles have loaded onto the network. Evacuation under adverse weather conditions would increase the total evacuation time to 145 minutes for Analysis Area 3.

4. Analysis Area 4 (Evacuation of Protective Action Areas 1, 2A, 2B, and 7). The Analysis Area 4 simulation includes the entire 90°, Northeast Sector, from 0 to 10 miles. The maximum evacuation time during all fair-weather conditions is 140 minutes, while the adverse weather condition would result in a peak evacuation time of 145 minutes. The Population within this area is only slightly higher than the population included in Analysis Area 2 (0-5 miles, 90° NE) and therefore the total evacuation time is the same as Analysis Area 2.

5. Analysis Area 5 (Evacuation of Protective Action Areas 1, 3A, 3B, 4A, 5A, 5B and 6). Analysis Area 5 includes the entire 90°, Southeast Sector from Grand Gulf Nuclear Station to the EPZ boundary. The town of Port Gibson is included in this analysis area.

Under all fair-weather conditions, evacuation could be completed within 145 minutes. Roadway capacity reductions during adverse weather thunderstorms increase the evacuation time to 150 minutes. Evacuation of this area is the determining factor in the total time required to evacuate the entire EPZ.

6. Analysis Area 6 (Evacuation of Protective Action Areas 1,12,8 and 9). For the Analysis Area 6 evacuation (90°, Northwest Sector, out to the 10-mile EPZ), vehicles could be evacuated within 140 minutes for the all three fair weather conditions. This area includes the Town of Newellton as well as several hunting and fishing camps. Adverse weather conditions for Analysis Area 6 would increase evacuation times up to 145 minutes.

7. Analysis Area 7 (Evacuation of Protective Action Areas 1, 12, 10 and 11). Analysis Area 7 includes the entire 90-degree Southwest Sector from the Grand Gulf Nuclear Station to the EPZ boundary. This case involves several major population components including the town of St. Joseph, the KOA, and the Newellton Country Club. Maximum fair-weather evacuation times of 140 minutes would occur during weekday, weeknight, and weekend periods. During adverse weather conditions, the areas included in Analysis Area 7 could be evacuated within 145 minutes.

8. Analysis Area 8 (Evacuation of the entire EPZ). The maximum time required to evacuate the entire EPZ under all fair-weather conditions is 145 minutes. To a large extent, the preparation/mobilization times associated with the transport dependent population define the maximum evacuation time for the EPZ. Any vehicle queuing that occurs along roadways dissipates before all vehicles have begun to evacuate from the EPZ.

During adverse weather conditions, it would take approximately 150 minutes to evacuate the entire EPZ. This increased time is due to reduced roadway capacities anticipated during an adverse weather thunderstorm condition.

EVACUATION TIME ESTIMATES

Analysis Area	Protective Action Area(s)	Description	Evacuation Time Estimates (minutes)			
			Weekday	Night	Weekend	Adverse Weather
1	1	360º, 2 mile	135	135	135	140
2	1, 2A	90º, Northeast, 5 mile	140	140	140	145
3	1, 3A, 4A, 5A	90º, Southeast, 5 mile	140	140	140	145
4	1, 2A, 2B, 7	90º, Northeast, 10 mile	140	140	140	145
5	1, 3A, 3B, 4A	90º Southeast, 10 mile	145	145	145	150
6	1, 12, 8, 9	90º, Northwest, 10 Mile	140	140	140	145
7	1, 12, 10, 11	90º, Southwest, 10 Mile	140	140	140	145
8	All Areas	360º, Entire EPZ	145	145	145	150

Annex F (Evacuation)
Appendix 5 (Reception Center and Shelter Facility Operations)

1. PURPOSE. To provide for the functioning of Reception Centers and Shelter Facilities during evacuation operations as a result of a radiological emergency at a Fixed Nuclear Facility (FNF).

2. CONCEPT OF OPERATIONS.

a. Reception Centers.

(1) General. The Reception Center is a key element in the evacuation process during a radiological emergency at the FNF. It serves as a focal point during evacuation and provides a place for coordination through which evacuees are monitored, decontaminated as necessary, and processed/registered. Reception Centers for the GGNS 10-mile EPZ are located at points well known to the populace and are situated on main traffic arteries that provide rapid access (See Tab A, this Appendix).

(2) Reception Center Operation.

(a) Upon notification of an SAE or anytime an evacuation is ordered, affected host counties will open and operate Reception Centers. (**MEMA is responsible for host county notification and emergency situation reports**.) It will be the responsibility of the host county in which the Reception Center is located, through its local Department of Human Services (DHS), to establish and operate the Reception Center. The State of Mississippi Department of Human Services (MDHS) will coordinate county efforts at Reception Centers to assure that state resources, not readily available in the county, are provided.

(b) Reception Centers provide indoor facilities for processing evacuees as well as sanitary facilities. Each is separated into three distinct operations/stations: Monitoring, Decontamination, and Registration. They have sufficient parking areas to allow temporary parking for evacuee vehicles, both clean and contaminated.

(c) Reception Centers are staffed by the following agencies/organizations: County Department of Human Services, County Civil Defense/Emergency Management, County Health Department, County Department of Mental Health, and American Red Cross.

Services provided by these agencies/organizations include:

- Registration of evacuees

- Monitoring of evacuees, emergency workers, and vehicles for radiological contamination

- Decontamination of evacuees, emergency workers, and vehicles

- Providing for immediate medical care for evacuees

- Assignment of evacuees to shelter facilities

- Aiding evacuees with service animals.

(d) One of the most important functions of the Reception Center is the accurate registration of evacuees so they may be contacted once they have passed through the Reception Center for shelter. Accurate records must be maintained for purposes of notification for evacuees' reentry to their homes, notification of emergencies concerning them, accounting for the fiscal aspects of evacuation, and for the basis of establishing legal claims that might arise from the evacuation. Registration forms and location rosters will be maintained at Reception Centers per existing MDHS procedures. The numbers of persons registered at Reception Centers will be reported by local DHS at the LEOC's and forwarded to the MDHS at the SEOC on hourly intervals. Host counties, through their local DHS, have the responsibility for maintaining records and contact with evacuees for control and reentry purposes.

(e) MDHS will supply the necessary paperwork for the Reception Center operation associated with registering evacuees.

(f) All evacuees, both ordered and spontaneous, will be processed through their respective Reception Centers, depending on which Sectors/PAAs are evacuated. The counties tasked to establish and operate each Reception Center will provide for local DHS services. All evacuees will be registered and processed, even those who do not elect to go to shelter facilities.

(g) Under the supervision of the MSDH/DRH, the county CD/EM will assure that evacuees are monitored and decontaminated if required, using procedures established and/or coordinated by MSDH/DRH and MEMA. Procedures are detailed in Annex G, as well as in each host county's REP Plan.

(h) County officials may establish the Reception Center before the SEOC decides for evacuation, if residents begin to spontaneously evacuate or if officials deem it necessary.

(i) GGNS onsite personnel will proceed to Warren County Reception Center to be monitored and registered if the evacuation traffic control management plan has been activated and the reception center opened. However, if the GGNS releases its employees before the Reception Center

opening, then they are free to go home.

b. Shelter Facilities.

(1) General. Evacuees will be assigned to a Shelter Facility at least 20 miles from the FNF site. Each host county will select shelter facilities based upon American Red Cross criteria and accessibility to the evacuees. The Shelter Facilities listed in this Appendix have been surveyed to assure compliance with the American Red Cross Disaster Services Guidelines and Procedures, ARC 3074, dated August 1976.

Primary Shelter Facilities are opened immediately upon notification that a radiological emergency has occurred, and that sheltering will be required for evacuees. Backup Shelter Facilities are opened as the Primary Shelter population indicates the need.

(2) Shelter Facility Operation.

(a) In the event evacuation is ordered, each host county will open and operate shelter facilities. The local chapter of the American Red Cross (ARC) is responsible for the direction and control of Shelter Facility operations. The State ARC will coordinate with the local ARC to ensure that State resources are available to supplement host county Shelter Facility operations.

(b) The local ARC will coordinate with the local DHS and other support or volunteer organizations staffing the Shelter Facility.

(c) ARC will supply the necessary paperwork for the Shelter Facility operation.

(d) Shelter Facilities provide indoor accommodations and basic personal needs for evacuees. They have sufficient parking areas to allow parking of evacuee vehicles. The shelter facilities are staffed by ARC and supported by DHS as needed.

(e) County Officials will coordinate with the ARC to open primary shelter facilities before a decision for evacuation, if residents begin to spontaneously evacuate or if officials deem it necessary.

(f) The host counties of Warren, Adams, and Copiah each have their Primary Shelter Facility located with their Reception Center. Hinds County's Reception Center and Shelter Facility are separate.

(g) Shelter Facility Passes will be issued by DHS personnel in the Reception Center to those evacuees requesting shelter. No evacuee will be allowed access to the Shelter Facility without presenting a Pass.

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Annex F (Evacuation)
Appendix 5 (Reception Center and Shelter Facility Operations)
Tab A (GGNS Reception Centers)

HOST COUNTY	ESTIMATED EVACUEES	RECEPTION CENTER LOCATION
Warren	1859	Sherman Avenue Elementary School 2145 Sherman Avenue, Vicksburg, MS
Adams	3710	Louis Gunning Safe Room 323 Liberty Road Natchez, MS
Copiah	4029	Joe L. Johnson Safe Room 1060 Epps Lane 39083 Hazlehurst, MS
Hinds	851	Hinds Community College Utica Campus Highway 18, 3 miles South of Utica Utica, MS

BACKUP GGNS RECEPTION CENTERS

HOST COUNTY	BACKUP RECEPTION CENTER LOCATION
Warren	Warren Central High School 1000 Highway 27 Vicksburg, MS
Adams	Natchez High School Gym 319 Sergeant Prentiss Drive Natchez, MS
Copiah	Hazlehurst Middle School 112 School Drive Hazlehurst, MS
Hinds	Unidentified at this time

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Annex F (Evacuation)
Appendix 5 (Reception Center and Shelter Facility Operations)
Tab B (GGNS Shelter Facilities)

HOST	PRIMARY SHELTER FACILITY	BACKUP SHELTER FACILITY	COUNTY
Warren	Sherman Avenue Elementary School 2145 Sherman Avenue, Vicksburg, MS	Warren Central High School 1000 Highway 27 Vicksburg, MS Shelter Capacity: 1320	
Adams	Steckler Building 319 Sgt Prentiss Dr Natchez, MS Shelter Capacity: 701	Natchez High School Gym 319 Prentiss Drive Natchez, MS Shelter Capacity: 750	
Copiah	Joe L. Johnson Safe Room 1060 Epps Lane 39083 Hazlehurst, MS Shelter Capacity: 600	Antioch Missionary Baptist Church 13145 Hwy 51 Hazlehurst, MS 39083 Capacity: 147	
Hinds	Hinds Community College Raymond Campus Mayo Field House College Drive Raymond, MS Shelter Capacity: 1500	Hinds County Public Schools will be made available if needed	

Note: Shelter capacity in a non-pandemic environment is the number of evacuees that can be sheltered in a facility based on square footage space required for each person. The planning standard for Short Term shelter stay (48-72 hours) is 20 square feet per person and for Long Term shelter stay (>72 hours) it is 40 square feet per person.

In a pandemic environment utilize these guidelines:

- FNF Evacuation General Population Shelters are for evacuation and of short duration up to 72 hrs.

- Residents and workers will be required to wear masks/cloth face coverings.

- The space allocation is 60 sq. ft. per person.

- The isolation care area space allocation will be 110 sq. ft. per person.

- Cots will be disseminated based on medical need.

- Accessible evacuation shelters will be indicated in a press release upon opening.

Annex F (Evacuation)
Appendix 5 (Reception Center and Shelter Facility Operations)
Tab C (Access and Functional Needs Population)

1. PURPOSE. To provide for the safety and well-being of those persons in the risk county who are physically impaired and unable to move outside a potential or actual effected area without special assistance.

2. CONCEPT OF OPERATIONS.

a. General. The Access and Functional Needs population will be notified and evacuated promptly by Claiborne County. Once in the Host County, this population will be processed at the designated Host County Reception Center.

Note: At Site Area Emergency there will be a precautionary transfer of the special needs population out of the area to effectively remove that population segment from traffic flow associated with a GE evacuation.

b. Functions.

(1) The Access and Functional Needs population will be transported to the Host County Reception Centers.

(2) The Access and Functional Needs population will be monitored and decontaminated upon arrival at the reception center. All personnel and equipment entering the reception center must be monitored, including wheelchairs, walkers, etc.

(3) After monitoring and decontamination, the population will be escorted to registration and registered by the Host County DHS.

(4) Access and Functional Needs population requiring medical attention will be transported to the nearest support hospital. Access and Functional Needs population not requiring medical attention (examples include blind, deaf, wheelchair-bound, etc.) will be sheltered, if they so desire.

*All Host County Reception Centers and Shelter Facilities are wheelchair accessible.

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Annex F (Evacuations)
Appendix 6 (Traffic Management Concepts)

1. PURPOSE. To provide for the efficient control of evacuee/emergency worker traffic in the event of a radiological emergency at a fixed nuclear facility.

2. TRAFFIC MANAGEMENT CONCEPTS. Two traffic management concepts could be used, either together or separately, during a radiological emergency involving a fixed nuclear facility.

a. Traffic Control is the efficient movement of traffic through a specific area. Traffic Control Points (TCPs) facilitate evacuee travel along designated evacuation routes while discouraging the flow of traffic in other directions.

b. Access Control is the discouragement of unauthorized people from entering a specific area. Access Control Points (ACPs) are located at key intersections on the periphery of the EPZ and may include all or part of the EPZ.

(1) The main purpose of the ACP is to advise the general public of the emergency condition thereby preventing unnecessary trips into the restricted area by unauthorized persons.

(2) An **EXCLUSION AREA** may be established upon completion of an evacuation. This is an area that may be subject to radiological contamination. If an exclusion area has been established, more stringent controls for entry need to be enforced. Entry will be allowed only to those persons with an **Exclusion Area Pass** issued by the MSDH/DRH, (See Tab A, this Appendix). Anyone needing an Exclusion Area Pass will be instructed to obtain it at the SEOC in Pearl, MS.

(3) An **Access Control Log** will be kept on all persons entering and leaving a controlled area, (See Tab B, this Appendix). This will ensure a record of pertinent information including pass number, dosimetry reading In/Out, and dates of ingress/egress.

3. GGNS EVACUATION TRAFFIC MANAGEMENT.

a. General. Nineteen TCPs (thirteen State and six local) will be set up to effectively limit ingress/egress to/from the GGNS 10-mile EPZ within Port Gibson/Claiborne County. These TCPs will impact federal, state, and local roadways. Three state TCPs are set up at SAE within the EPZ. At GE, the three SAE TCPs are withdrawn, and seven GE TCPs are established on the 10-mile EPZ periphery to affect EPZ traffic flow. Three additional GE TCPs are established on the Natchez Trace Parkway to limit its use only to emergency vehicles. Six local TCPs are set up at SAE around Port Gibson to remain in position through GE and withdrawn upon the completion of the evacuation (See Tab C, this

Appendix).

b. Key Groups involved in GGNS Traffic Management.

(1) Mississippi Highway Patrol (MHP). MHP is responsible for establishing traffic and access control at ten State TCPs, SAE 1-3 and GE 4-10. There will be one MHP unit assigned to each TCP.

(2) Local Law Enforcement.

(a) The Claiborne County Sheriff's Office and the Port Gibson Police Department are responsible for establishing traffic control within their respective jurisdictions by manning local TCPs A1-A6 in and around the town of Port Gibson.

(b) The Clinton Police Department will establish a State TCP (GE 13) to affect the Natchez Trace Parkway closure at I-20. GE 13 TCP personnel will not be considered as emergency worker status based upon their 45-mile distance from GGNS. No emergency worker instrumentation will be required at this TCP location.

(c) County Emergency Management Agencies have emergency contracts already in place to obtain tow trucks to immediately remove immovable vehicles from evacuation routes.

(d) County Emergency Management will obtain county assets to remove impediments to evacuation routes through regular means for items such as downed trees, car accidents, etc.

(3) Natchez Trace Parkway (National Park Service). Natchez Trace Parkway Rangers are responsible for establishing two State TCPs on the Natchez Trace, GE 11-12. There will be a ranger assigned to each TCP. Natchez Trace personnel will also erect unmanned traffic control devices (barricades) to control access to the parkway at the intersections with Airport Road, Regantown Road, and Whitaker Road.

(4) Mississippi Department of Transportation (MDOT). MDOT is responsible for the delivery of access control equipment including traffic cones, drums, signs, and barricades. MDOT's EM Coordinator or designee is responsible for notifying the Natchez Trace Parkway and for notifying the Clinton Police Department for assistance in traffic control on the Natchez Trace Parkway. MDOT will coordinate with County Transportation Departments in the event of inclement weather requirements such as snowplows.

(5) Mississippi National Guard (MSNG). Immediately following notification of a verified Hostile Action Based event at Grand Gulf Nuclear Station, MEMA will request MSNG mobilize and

respond to the Incident Command Post (ICP) with a leader possessing decision making authority and communication capability to augment the unified command staff located at the Claiborne County EOC. The MSNG will be assigned two specific missions during such an event:

(a) Assume command and control of all traffic control points designated by the Incident Commander thereby relieving Mississippi Highway Patrol (MHP) and other law enforcement personnel to be redeployed as necessary. Traffic and access control points are delineated in Annex F, Appendix 6 of the Mississippi Radiological Emergency Preparedness Plan (MREPP) revision 15, dated June 2014.

(b) Provide Radiological Field Team assessment personnel to conduct radiological field assessments within the Emergency Planning Zone (EPZ) until such time the threat has been mitigated and the MSNG personnel are relieved by MSDH/DRH Radiological Field Team personnel.

At the request of MEMA, the MSNG will muster and deploy as quickly as possible by:

(c) Assuming control of all traffic control points designated by the Incident Commander thereby relieving Mississippi Highway Patrol (MHP) and other law enforcement personnel to be redeployed as necessary. Traffic and access control points are delineated in Annex F, Appendix 6 of the Mississippi Radiological Emergency Preparedness Plan (MREPP) revision 15, dated June 2014.

(d) Providing Radiological Field Team assessment personnel to conduct radiological field assessments within the EPZ until such time the threat has been mitigated and the MSNG personnel are relieved by MSDH/DRH radiological field team personnel.

c. Specific procedures and checklists for TCP and ACP conduct can be found in the MDOT Radiological Emergency Response Plan and MEMA's Traffic and Access Control Handbook for Radiological Emergencies.

4. RBS EVACUATION TRAFFIC MANAGEMENT.

a. General. Sixteen TCPs will be set up extending across Wilkinson and Amite Counties to the Pike County line to monitor and limit traffic access/egress between Louisiana and Mississippi in the event of a radiological emergency at the River Bend Station (RBS) at St. Francisville, Louisiana, thereby lowering the possibility of radiological contamination being brought into Mississippi. These TCPs will impact both state and county roadways (See Tab D, this Appendix).

b. Key Groups involved in RBS Traffic Management.

(1) Mississippi Highway Patrol (MHP). MHP is responsible for establishing access control and staffing TCPs on State maintained highways. Six State highways are under MHP jurisdiction in Wilkinson and Amite counties. They are Highways 61, 33, 569, 568, 571, and 584 spurs. There will be one MHP unit assigned to each TCP.

(2) Local Law Enforcement (County Sheriff). The local law enforcement officials are responsible for establishing TCPs within their respective jurisdictions on ten county-maintained roads. Four roads are in Wilkinson County and six are in Amite County. There will be two local law enforcement officers assigned to each TCP. (Note that if local law enforcement is reluctant to participate, State agencies with law enforcement capabilities will perform this task.)

(3) Mississippi Department of Transportation (MDOT). MDOT is responsible for planning for their emergency response involving delivery/erection of required signs and barricades to affect roadway closure/monitoring stations.

c. RBS TCP Radiological Monitoring. There will be two radiological monitors assigned to each TCP in addition to the State or local law enforcement officer. A radiological monitoring capability at TCPs is necessary to effectively survey produce, goods, and people to limit potential radiological contamination from entering Mississippi. This radiological monitoring capability will be provided by the following groups:

(1) MSDH/DRH.

(2) MDOT Lab Personnel.

(3) MEMA.

(4) Local CD/EMAs.

(5) Other State agencies with RM capabilities.

Annex F (Evacuations)
Appendix 6 (Traffic Management Concepts)
Tab A (Exclusion Area Pass)

EXCLUSION AREA PASS REP-13

PASS NUMBER: _____

NAME: _____ ISSUE DATE/TIME: _____

ADDRESS: _____ EXPIRATION DATE: _____

PURPOSE OF ENTRY: _____

_____

_____

This pass entitles the above-named person to (limited - unlimited) entry to the following facility/area: _____

Signed: _____

Title: _____
MS Dept. of Health/Div. of Rad. Health

DOSIMETER LOG

MAXIMUM ALLOWED: _____ TOTAL TO DATE:

	DOSIMETER READING	
TIME	ENTERING	LEAVING

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Annex F (Evacuation)
Appendix 6 (Traffic Management Concepts)
Tab B (Access Control Log)

ACCESS CONTROL LOG REP-14

ACP LOCATION: _____

NAME ADDRESS (OF PERSON ENTERING)	DATE TIME IN	DOSIMETER READING IN	DATE TIME OUT	DOSIMETER READING OUT	EXCLUSION AREA PASS NO.	INITIALS ACP PERSONNEL

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Annex F (Evacuations)
Appendix 6 (Traffic Management Concepts)
Tab C (GGNS Emergency Traffic/Access Control Point Locations)

TCP #	LOCATION DESCRIPTION
	- - - - - - STATE LOCATIONS - - - - - -
SAE 1	MS 462 west of intersection with US 61
SAE 2	Ingleside-Karnac Ferry Road west of intersection with US 61
SAE 3	Shiloh Road west of intersection with US 61
GE 4	US 61 at intersection of Floyd Road, 1.0 mile south of the Warren/Claiborne County line
GE 5	MS 462 and Willow Road near the intersection at Willows Community
GE 6	MS 18 at intersection of Romola Road, 1.6 miles east of the Natchez Trace Parkway
GE 7	MS 547 at intersection of Tillman Road, 2.8 miles west of Pattison
GE 8	US 61 at the intersection of Gordon Station Annex Road
GE 9	Russum Westside Road at intersection with US 61 at Russum
GE 10	MS 552 at intersection of north entrance to Alcorn State University
GE 11	Natchez Trace Parkway at intersection with MS 552 above Lorman
GE 12	Natchez Trace Parkway at Grindstone Ford
GE 13	Natchez Trace Parkway interchange ramps w/I-20 at Clinton (non-emergency worker status)
	- - - - PORT GIBSON/CLAIBORNE COUNTY LOCATIONS - - - -
A1	US 61 at MS 18
A2	Anthony Street at Railroad
A3	Rodney Road at City Limits
A4	US 61 and South City Limits
A5	US 547 and Pinehurst Street
A6	MS 547 at Bridewell Lane

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Annex F (Evacuations)
Appendix 6 (Traffic Control Concepts)
Tab D (RBS Emergency Traffic/Access Control Point Locations)

TCP #	LOCATION DESCRIPTION
	- - - - - - **STATE LOCATIONS** - - - - - -
RB1	US 61 at Louisiana State Line
RB2	MS 33 at Louisiana State Line
RB3	MS 569 at Louisiana State Line
RB4	MS 568 at Louisiana State Line
RB5	MS 571 at Louisiana State Line
RB6	MS 584 Spur at Louisiana State Line
	- - - - **WILKINSON COUNTY LOCATIONS** - - - -
RBW7	Pond Pinckneyville Road at Louisiana State Line
RBW8	Jackson Louisiana Road at Louisiana State Line
RBW9	Laurel Hill Road at Louisiana State Line
RBW10	Louis Gaulden Road at Louisiana State Line
	- - - - **AMITE COUNTY LOCATIONS** - - - -
RBA11	Woodside Road at Louisiana State Line
RBA12	Perkins Road at Louisiana State Line
RBA13	Ash Road at Louisiana State Line
RBA14	Street Road at Louisiana State Line
RBA15	Bean Road at Louisiana State Line

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Annex F (Evacuations)
Appendix 7 (Emergency Human Services)

1. PURPOSE. To provide coordination in planning and operations of all welfare assistance and services to individuals and families administered by public and private welfare or welfare-related agencies during a radiological emergency at Grand Gulf Nuclear Station or River Bend Station.

2. CONCEPT OF OPERATIONS.

a. General. The State Department of Human Services (MDHS) directs detailed emergency human services and operations to be maintained by County Departments of Human Services in all counties affected by an emergency at GGNS or RBS. This includes Claiborne County as the risk county and Copiah, Hinds, Adams, and Warren Counties as the host counties. Counties affected in the ingestion exposure pathway by an emergency at RBS include Adams, Wilkinson, Amite, Franklin, and Pike.

b. Responsibilities (State/Local Department of Human Services).

(1) Provides direction and control of reception center activities.

(2) Provides support to ARC shelter facility activities, as needed.

(3) Provides care for unaccompanied children through the provision of protective services such as temporary housing and care until reunited with their families.

(4) Provides a central location service to reunite separated family members.

(5) Develops procedures for the use of all Department of Human Services' resources within respective counties.

(6) Coordinates activities with state and local CD/EM organizations.

(7) Participates in REP training and exercises.

(8) Maintains appropriate records of activities to plan for cost reimbursement following an incident at GGNS or RBS.

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Annex F (Evacuations)
Appendix 8 (American Red Cross)

1. PURPOSE. To provide coordination in planning and operations of mass care/sheltering activities during a radiological emergency at Grand Gulf Nuclear Station or River Bend Station.

2. CONCEPT OF OPERATIONS.

a. General. The American Red Cross (ARC) at the state level coordinates with the local ARC Units (Chapters) to plan for radiological emergencies in cooperation and coordination with the appropriate local governments.

b. Responsibilities (State/Local American Red Cross).

(1) Provides direction and control of shelter facility activities.

(2) Provides support to MDHS reception center activities, within resource constraints.

(3) Provides a sufficient number of personnel trained as shelter managers and shelter workers to initiate and sustain mass care operations in shelter facilities.

(4) Surveys buildings selected by the local government to be used as shelter facilities to ensure that the buildings meet ARC standards.

(5) Secure written agreements for the use of designated shelter facilities.

(6) Provides ARC liaison workers to reception centers to observe and assist in controlling the flow of evacuees to shelter facilities.

(7) Participates in REP training and exercises.

(8) Maintains appropriate records on the activities of mass care during an emergency.

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Annex F (Evacuations)
Appendix 9 (Salvation Army)

1. PURPOSE. To aid in planning and operations for mass care/sheltering activities during a radiological emergency at GGNS or RBS.

2. CONCEPT OF OPERATIONS.

a. General. The Mississippi Division of the Salvation Army is available to provide assistance to support radiological emergency planning and response activities in cooperation and coordination with local, state, and federal organizations/agencies.

b. Responsibilities of The Salvation Army (Mississippi Division).

(1) Provide counseling services to evacuees/families, emergency workers, volunteers, and others as needed.

(2) Provides food, drink, and comfort at emergency locations with Mobile Feeding Canteens.

(3) Provides personal needs, such as clothing, shoes, blankets, or other items as needed.

(4) Supports other agencies/organizations while they work during emergency conditions by providing food, drink, and comfort.

(5) Supports shelter activities by making available Salvation Army Units for additional backup shelter space.

(6) Participates in REP training and exercises.

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Annex F (Evacuations)
Appendix 10 (Medical and Public Health Services)

1. PURPOSE. This appendix establishes arrangements to insure the provisions of transportation and medical care to contaminated injured individuals from the plume exposure pathway EPZ of GGNS.

2. CONCEPT OF OPERATIONS.

a. General. Designated primary and backup hospitals provide treatment and care of contaminated injured individuals. The term "contaminated injured means (1) contaminated and otherwise physically injured; or (2) contaminated and exposed to dangerous levels of radiation; or (3) exposed to dangerous levels of radiation. GGNS will make its arrangements for medical transportation and medical service needs for any affected plant personnel.

b. Organization.

(1) Ambulances. Arrangements have been made with ambulance services to provide medical transportation for members of the general public who may be exposed to dangerous levels of radiation at GGNS. Because the early symptoms of persons exposed to dangerous levels of radiation are usually limited to vomiting and nausea, ambulances may not be required to transport all affected persons to the appropriate medical facility. In those instances, non-specialized public and private vehicles may be used. Letters of Agreement have been obtained with these organizations (See Annex M). Primary and any additional ambulance service needed will be provided by:

(a) Primary: American Medical Response Ambulance Service, Natchez, MS (Claiborne County)

(b) Additional: MS Dept. of Health, Bureau of EMS/TRAUMA, Jackson, MS

(2) Medical Services. Selected hospitals provide medical services for treatment and care of contaminated injured individuals. Letters of Agreement have been obtained with these hospitals (See Annex M). Primary and backup medical services will be provided by:

(a) Primary: Merit Health River Region, 2100 Hwy. 61 North, Vicksburg, MS 39183
BED CAPACITY: 341

(b) Backup: Riverland Medical Center, P.O. Box 111, Ferriday, LA 71334
BED CAPACITY: 60

(3) Other Medical Facilities. Several other hospitals and ambulance services in Mississippi are capable of providing medical support for any contaminated injured individual from a fixed nuclear facility emergency in the event primary and backup resources are exhausted. Letters of Agreement have been obtained with these facilities.

(4) Government-owned facilities are available to provide radiological emergency services. These services are available if the magnitude or uniqueness of a radiological incident exceeds in-house and commercially available capabilities. They include:

(a) Radiation Emergency Assistance Center, Training Site (REACTS), Oak Ridge, TN

(b) National Disaster Medical System (NDMS), Rockville, MD

c. Responsibilities.

(1) State.

(a) Mississippi State Department of Health.

- **Division of Radiological Health.**

o Provides technical assistance and guidance to agencies providing transportation for contaminated injured individuals.

o Provides technical assistance and guidance on exposure control and decontamination for transportation providers and equipment.

- **Division of Emergency Medical Services**.

o Assists in the development and maintenance of Annex F, Appendix 10, Medical and Health Services, to the MREPP.

o Assists in obtaining Letters of Agreement from medical facilities to support this Appendix.

(b) Mississippi Emergency Management Agency.

- Develops and maintains Annex F, Appendix 10, Medical and Public Health Services, to the MREPP.

- Assists local governments in developing and maintaining plans and procedures to support medical services.

- Provides training and exercises.

(2) Local.

(a) Vicksburg/Warren County Civil Defense.

- Acts as lead coordinating agency for emergency medical services provided by Warren County.

- Provides plans and procedures outlining the County's role to support medical services.

- Assists in the training and exercise programs.

(b) Vicksburg Fire Department Emergency Medical Service.

- Provides primary and backup transportation for contaminated injured individuals.

- Participates in training and exercises to assure adequacy of the treatment and care of contaminated individuals.

(c) River Region Health System, Inc. and Riverland Medical Center.

- Provides primary and backup medical facilities and services for the treatment and care of contaminated injured individuals.

- Participates in training and exercises to assure adequacy of the treatment and care of contaminated individuals.

(3) Other.

(a) Grand Gulf Nuclear Station.

- Provides necessary equipment and supplies to the primary and backup medical facilities and transportation providers.

- Provides technical assistance, guidance, and training to primary and backup medical facility personnel.

(b) Support Hospitals.

- Provides support medical facilities and services to treat contaminated injured individuals.

- Participates in training to assure adequacy of treatment and care of contaminated injured individuals.

(c) Support Ambulance Services.

- Provides transportation for contaminated injured individuals.

- Participates in training and exercises to assure adequacy of the treatment and care of contaminated individuals.

Annex G (Radiological Exposure Control)

1. PURPOSE. To establish policy and procedures for the protection of the public and offsite emergency workers from radiological exposure in the event of an accident at Grand Gulf Nuclear Station (GGNS) or River Bend Station (RBS).

2. CONCEPT OF OPERATIONS.

a. General.

(1) Lead Agency. The Mississippi State Department of Health (MSDH) is the lead agency for radiological exposure control, chaired by the State Health Officer (SHO). The MSDH is the decision-making organization for the protection of public health and safety during a radiological emergency. During immediate action conditions and on a day-to-day basis, the Division of Radiological Health (DRH) acts for the MSDH and will declare or implement the necessary protective actions to protect the public and emergency workers. Federal and fixed nuclear facility workers will provide their radiological exposure controls.

(2) Local. Reception/host counties are responsible for providing radiological monitoring and decontamination for the general public and emergency workers. This activity will take place at the reception centers before assignment to shelter facilities. If additional decontamination is necessary, arrangements will be made to transport affected persons to River Region Health System, Inc. Emergency workers conducting radiological monitoring and decontamination will maintain adequate records and will report all necessary survey information, resource shortages, and the need for contaminated waste disposal to MSDH/DRH.

NOTE: Monitoring of 20% of all evacuees must be completed within 12 hours of the completion of the evacuation.

b. Radiological Exposure Control Measures for the General Public.

(1) Personnel radiological monitoring will be conducted using the Portable Portal Monitor and/or handheld Survey Meter. Individuals will be surveyed for contamination per established procedures. Decontamination shall be performed if the radiological contamination levels exceed two (2) times that of local background. All evacuees will be monitored and certified as being below limits before entering shelters.

(2) Radiological monitors will be responsible for reporting the following information to the local CD/EM Directors at <u>two-hour intervals</u> following the commencement of surveying:

(a) The number of persons surveyed.

(b) The number of persons decontaminated at the reception center.

(c) The number of persons sent to a medical facility for further decontamination procedures.

(d) The highest reading for each contaminated individual.

(3) Local CD/EM Directors will be responsible for consolidating all decontamination information received from reception centers and reporting it to MSDH/DRH at the SEOC at two-hour intervals following the commencement of procedures.

(4) The decontamination of individuals will take place according to established procedures. Each reception center should have the following available:

(a) Shower facilities for males and females.

(b) A change of clothing for contaminated individuals.

(c) Facilities for storing contaminated personal items, including clothing. (These facilities will usually consist of a separate room with containers lined with plastic bags. The contaminated items and other material will be identified and held in a restricted area until arrangements are made for their decontamination or disposal.)

(d) Vehicles and drivers to transport individuals to medical/shelter facilities.

(5) The monitoring and decontamination of vehicles will be accomplished at the reception centers.

(a) Vehicles will be monitored at a designated area near the reception centers after evacuees have been monitored. As conditions dictate, the driver of the vehicle remains with the vehicle until the vehicle has either been cleared or is found to be contaminated beyond recovery.

(b) Any vehicles found to be contaminated will be impounded. Impounded vehicles will be located in a separate designated parking area. Decontamination of vehicles may be performed as time permits.

c. Radiological Exposure Control Measures for Emergency Workers.

(1) At the time of a fixed nuclear facility accident, emergency workers may be called upon to perform functions within risk areas ranging from public notification to conducting lifesaving

missions. Persons assisting with radiological monitoring and decontamination at reception centers will be included in radiological exposure control measures used for emergency workers. (Note: Emergency workers are those persons engaged in public service activities and as such, place themselves under different criteria for protection than the general public.)

(2) Before, or at the time that protective response measures are recommended to the public, emergency workers will initiate steps to protect against radiation exposure. (Note: Specific authorization of the State Health Officer/Mississippi State Department of Health, (SHO/MSDH) is necessary for emergency workers to exceed the EPA PAGs for the general population.) Specific measures taken at the time will include the following:

(a) Each emergency worker will be provided with dosimetry at the time they report for duty. State emergency workers will receive dosimetry and other instruments/materials from pre-issued REP Kits/Boxes either from the SEOC or from Civil Defense and Emergency Management, (CD/EM) personnel at a local EOC. Local emergency workers will be provided with dosimetry and other instruments/materials from local supplies and augmented by the state as needed. Each Self-Reading Dosimeter (SRD) is to be read every 30 minutes with readings recorded on the individual's Personal Radiation Exposure Card (REP-1). Report any SRD hairline movement to your supervisor. Radiological survey meters will be available when needed. Each emergency worker will receive:

- One SRD (Range: 0 to 20 R)

- One SRD (Range 0 to 200 mR)

- One permanent exposure recording device such as a Thermo Luminescent Dosimeter (TLD) or film badge.

(b) TEDE (whole-body) exposure limit for emergency workers other than lifesaving missions is 5 Rem. Note: To reduce stress and fatigue effects and minimize the time required to complete tasks, respiratory protection for emergency workers will not be advised. To compensate for the difference between the external gamma exposure (as read on the SRD) and the TEDE (which includes the external gamma exposure plus any exposure from inhaled radionuclides), the exposure recorded on the SRD will be multiplied by a factor of five (5). Thus, exposure of 1R on the SRD will be interpreted to be a TEDE of 5 Rem.

- Any emergency worker receiving a discernible exposure on the SRD will be instructed to report to their supervisor for reassignment outside the EPZ until exposure can be verified.

- If an emergency worker registers an **exposure of 1R** on the SRD, ***he shall be instructed to leave the risk area and immediately report to a designated decontamination location.*) 1R will be referred to as the Turn Back Value**.

- Any emergency worker receiving an **exposure of 1R** on the SRD **after completing the decontamination procedures** shall have a whole-body count performed at either River Region Medical Center location or designated Entergy Fixed Nuclear Facility, (FNF) site to determine any additional assessment of receiving significant exposure from internally deposited isotopes.

- Any emergency worker receiving a dose (TEDE) of 10 Rem or above may be instructed to seek medical treatment at the nearest available facility capable of dealing with radiation exposure cases.

d. Radiological monitoring and decontamination for the county, state, and federal emergency workers will take place at the Emergency Worker Decontamination Stations and/or at reception centers while they are activated (See Appendix 4, Tab D). Each emergency worker is responsible for reporting to a decontamination station after the emergency or at the end of their shift. Decontamination of emergency vehicles, supplies, and equipment will take place at specific emergency worker decontamination stations or at the reception centers (while they are activated). Provisions for the medical treatment of emergency workers will be made at River Region Medical Center. Emergency workers are responsible for filling out their Personal Exposure Cards (REP-1) as required. After the emergency, these cards will be returned to the location from which they were distributed. This information will then be transferred to the Permanent Radiation Exposure Record (REP-2) that will be submitted to the MSDH/DRH, who will be responsible for compiling the information.

e. Emergency worker authorization for exceeding EPA Protective Action Guides (PAGs). Emergency worker guidelines are based on cumulative dose constraint levels. These are based on an assumption that doses acquired in response to a radiological incident would be "once in a lifetime" doses and that future radiological exposures would be substantially lower.

Recommendations in Table G-1 provide a guideline level of 5 rem (50 mSv) for worker protection and alternative emergency worker guidelines for certain activities where doses above 5 rem (50 mSv) cannot be avoided. For most radiological incidents, radiation control measures (e.g., minimizing time, maximizing distance, using shielding) will prevent doses from reaching the 5 rem (50 mSv) occupational exposure guideline while performing typical emergency response activities such as transportation, firefighting, and medical treatment of contaminated victims at hospitals. However, in those situations in which victims are injured or trapped in high radiation areas or can only be reached via high radiation areas, or for protection of critical infrastructure,

exposure control options may be unavailable or insufficient and doses above 5 rem (50 mSv) may be unavoidable.

Decisions to take response actions that could result in doses above 5 rem (50 mSv) can only be made at the time of the incident, under consideration of the actual situation. Only after ALARA measures have been applied to the fullest extent and the SHO has authorized an increase in occupational limits to the Governor or GAR and henceforth approved, will exposure to excessive occupational limits be authorized. In such situations, incident commanders and other responders need to understand the risk posed by such exposures to make informed decisions. The emergency worker guidelines for life and property saving activities in Table G-1 are provided to assist such decision-making. These guidelines apply to doses incurred throughout an emergency and are assumed to be once in a lifetime. After the early phase, no more lifesaving missions would likely be needed. However, some critical infrastructure/key resources or lifesaving missions may arise in the intermediate phase, where these guidelines would apply.

Emergency personnel may be exposed to increased radiation during the unique catastrophic event of a Fixed Nuclear Facility General Emergency resulting in a firestorm and widespread destruction of structures. The emergency intervention needed to prevent further destruction and loss of life may result in increased exposure. Exceeding the emergency worker guidelines in Table G-1 may be unavoidable in responding to such events. For all exposures, emergency workers must be fully informed of the risks of exposure they may experience, including numerical estimates of the risk of delayed health effects, and must be trained, to the extent feasible, on actions to be taken. Each emergency worker should make an informed decision as to how much radiation risk they are willing to accept to complete a particular mission.

Table G-1. Emergency Worker Guidelines

Guideline	Activity	Condition
5 rem	All occupational exposures	All reasonably achievable actions have been taken to minimize dose.
10 rem [a]	Protecting critical infrastructure necessary for public welfare (e.g., a power plant)	Exceeding 5 rem unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
25 rem [b]	Lifesaving or protection of large populations	Exceeding 5 rem unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.

>25 rem	Lifesaving or protection of large populations	All conditions above and only for people fully aware of the risks involved (see Tables 3-2 and 3-3)

a. For potential doses >5 rem, medical monitoring programs should be considered.
b. In the case of a very large incident, such as an IND, incident commanders may need to consider raising the property and lifesaving emergency worker guidelines to prevent further loss of life and massive spread of destruction.
This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

f. The Use of Potassium Iodide (KI). Potassium Iodide is a substance that serves to block the absorption of radioiodine by the thyroid gland. KI will be available for use by emergency workers in the risk area during an emergency. This substance will be administered at the order of the SHO/MSDH per MSDH policy. MSDH/DRH will ensure that KI will be distributed at the time of an emergency to emergency workers according to established arrangements (See Appendix 5).

3. ORGANIZATION AND RESPONSIBILITIES.

a. Mississippi State Department of Health, Division of Radiological Health.

(1) The lead State agency for radiological exposure control.

(2) Coordinate decontamination activities.

(3) Recommend measures to mitigate radiological effects on public health.

(4) Establish radiological exposure control.

(5) Formulate guidelines for emergency worker exposure and develop KI policies.

(6) Maintain permanent records on emergency worker exposure.

(7) Participate in drills and exercises relative to radiological exposure control.

b. Mississippi Emergency Management Agency.

(1) Provide radiation detection equipment.

(2) Establish a program for the inspection, maintenance, calibration, and distribution of radiation detection equipment.

(3) Request that the MS National Guard assist in field team monitoring support with Force Protection during a hostile action type of event at GGNS.

(4) Maintain records of radiation equipment.

(5) Provide radiation exposure control training.

(6) Provide communications for direction and control of radiological accident response operations.

(7) Provide resource support to the radiological monitoring and decontamination efforts of affected counties.

(8) Provide a MEMA Radiation Exposure Control Officer (RECO) Lead to ensure County RECO personnel meet the needs of emergency workers in KI and equipment distribution and ensure control of state emergency worker exposure procedures are met by each locality.

(9) Coordinate all radiological exposure control related activities.

(10) Prepare and conduct training and drills for personnel responsible for monitoring and decontamination, and dosimetry training for all emergency workers.

c. Mississippi National Guard. During a hostile action type of event at GGNS provide Radiological Field Team assessment personnel to conduct radiological field assessments and conduct Force Protection activities within the Emergency Planning Zone (EPZ) until such time the threat has been mitigated and the MSNG personnel are relieved by MSDH/DRH Radiological Field Team personnel.

d. Mississippi Highway Patrol.

(1) Provide emergency highway traffic regulation and control.

(2) Provide support to communications.

e. Mississippi Department of Transportation.

(1) Provide support to access/egress control.

(2) Provide support communications.

f. Local Government.

(1) Provide personnel to conduct radiological monitoring and to assist with procedures for the decontamination of both the general public and emergency workers.

(2) Provide for exposure control for all local emergency workers through the issuance of dosimetry to each emergency worker in the EPZ, and a plan to rotate emergency workers to balance whole body doses received.

(3) Maintain necessary decontamination records and report this information to MSDH/DRH after the emergency.

(4) Provide site location and personnel to conduct radiological monitoring and decontamination of emergency workers.

(5) Provide a State Radiation Exposure Control Officer (RECO) as well as designate a local RECO for the risk and host counties. The RECO is responsible for the state emergency worker exposure control equipment and the issuance of KI.

g. Federal Government. The Federal Government, through the DOE in conjunction with the Nuclear/Radiological Incident Annex (NRIA), is responsible for supporting State radiological exposure control efforts including the augmentation of personnel, equipment, and supplies as well as assisting with the disposal of contaminated materials (See Annex D).

h. Utility.

(1) Provide onsite radiological exposure control.

(2) Provide for the disposal of all contaminated waste generated by county/state radiological exposure control and decontamination efforts.

Annex G (Radiological Exposure Control)
Appendix 1 (Personal Radiation Exposure Card) (REP-1)

PERSONAL RADIATION EXPOSURE CARD

REP-1 REP-1

EMERGENCY WORKER PERSONAL DATA
Social Security #
___-___-____

DATE: _____

NAME: _____

AGENCY: _____

ASSIGNMENT: _____

TLD #: _____

For Additional Information Contact:
MS EMERGENCY MANAGEMENT AGENCY
601-933-6362

MS State Dept. Of Health/Division of Radiological Health
(601) 987-6893

INSTRUCTIONS:

This record must be completed for all Emergency Response Personnel who enter a radiation area.

Record the start time in the first block of the time column, and write in successive 30 min. intervals.

To determine DOSE received each period, subtract the current reading from the previous reading. The total ACCUMULATED DOSE is the total of all the DOSES for all the time periods.

Exposure must be transferred to REP-2 Permanent Radiation Exposure Record maintained by your supervisor.

Special Instructions: If you enter an area which could possibly be contaminated, contact your supervisor or access control post personnel for decontamination instructions.

Back

SRD DATA	LOW RANGE Type: _____ Number: _____		HIGH RANGE Type: _____ Number: _____	
TIME	READING	DOSE*	READING	DOSE*
Accumulated Dose*				

POTASSIUM IODIDE (KI) RECORD

In the event of an accident involving radioactive materials, releases of radioactive iodine are possible. If the presence of this isotope is suspected, you will be instructed by your supervisor to take KI tablet. If you take KI fill in the information below.

DATE: _____

TIME TAKEN: _____

_____

*EMERGENCY workers are allowed to receive a maximum dose of one (1) R on their Self Reading Dosimeter (SRD). Read your SRD every 30 minutes and record readings. Report any SRD hairline movement to your Supervisor. Note: 1R is the turn back value.

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Annex G (Radiation Exposure Control)
Appendix 2 (Permanent Radiation Exposure Record) (REP-2)

PERMANENT RADIATION EXPOSURE RECORD – REP 2

*Print legibly using ink.

SOCIAL SECURITY #: ☐☐☐ - ☐☐ - ☐☐☐☐

NAME: _____ ORGANIZATION: _____

ADDRESS: _____ EMERGENCY WORKER'S SIGNATURE:

_____ X _____

DATE	CDV-138 (0 _ 200mR)*				CDV-730 (0 _ 20R)*				TLD
	SERIAL #	INITIAL	FINAL	TOTAL	SERIAL #	INITIAL	FINAL	TOTAL	SERIAL #
		mR	mR	mR		R	R	R	_____
		mR	mR	mR		R	R	R	READING
		mR	mR	mR		R	R	R	_____
		mR	mR	mR		R	R	R	DATE READ
		mR	mR	mR		R	R	R	_____
		Accumulated Total		mR		Accumulated Total		R	

REMARKS: _____

Potassium Iodide (KI) Record

	Date	Time	Amount
Day 1			1 Tablet
Day 2			1 Tablet
Day 3			1 Tablet
Day 4			1 Tablet
Day 5			1 Tablet
Day 6			1 Tablet
Day 7			1 Tablet
Day 8			1 Tablet
Day 9			1 Tablet
Day 10			1 Tablet

*Required Dosimetry (Packed in REP kits)

White Copy: Radiological Health Yellow Copy: Agency/Jurisdiction Pink Copy: Emergency Worker

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Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles)

1. GENERAL. This procedure details the methods and equipment to be used to monitor evacuees and their vehicles for radiological contamination upon their arrival at a reception center.

a. Use the Portable Portal Monitor (See Portal Monitor procedures).

b. Use the low-range survey instrument.

(1) Open the instrument and install batteries.

(2) Check the instrument for operability using the check source located inside the instrument kit.

(3) Attach the headphone, if equipped, to the survey instrument. This will aid the monitor in locating contamination and controlling the probe. The position of the probe can be visually followed, and physical contact can be avoided.

(4) Check and record background readings before the arrival of evacuees for reference.

c. Precautions.

(1) Monitors should wear gloves and booties when monitoring vehicles and evacuees.

(2) Protect the probe from contamination by placing a plastic bag cover over the probe with the shield open.

(3) Notify the local Crew Leader if contamination levels exceed that of local background. The local Crew Leader will notify the Team Leader.

(4) Ensure that background levels of radiation are accounted for when conducting contamination surveys. The normal background is approximately 25-35 CPM.

(5) All contaminated disposable items will be placed in a heavy-duty garbage bag for disposal and labeled with a radiation sign.

(6) Any emergency worker in the monitoring and decontamination area whose dosimeter shows a discernible dose will report this information to his/her supervisor. Dosimeters should be read at least every 30 minutes unless directed to read them more frequently.

(7) No eating, drinking, or tobacco use in the monitoring and decontamination area.

2. MONITORING PROCEDURES.

a. Preliminary Actions: Evacuee Vehicle Arrival

NOTE: Vehicles arriving at the Reception Center will be considered contaminated and will be secured in the vehicle parking area until monitored. Vehicle monitoring and decontamination will be performed as conditions allow.

(1) All vehicles arriving at the Reception Center will be logged in using the Vehicle Monitoring Log (REP-8).

(2) Remove passengers as per bootie instructions below:

(a) Passengers are to open their door(s), swinging their feet out in the air. *Do not allow them to touch their feet to the ground.*

(b) Have evacuees place booties, provided them, over their feet before stepping from the vehicle.

(3) Passengers are escorted directly to the Primary Monitoring Station.

(4) The driver will remain in the vehicle and will be directed to the designated secure parking area.

(5) Remove the driver as per bootie instructions in 2 above, and escort him/her directly to the Primary Monitoring Station.

b. Evacuee Vehicle Monitoring.

NOTE: Evacuee vehicle monitoring will be performed as conditions allow.

(1) Use the low range survey instrument. Attach and use headphones if equipped.

(2) Perform an operational check on the survey meter.

(3) Wear gloves and booties when monitoring vehicles.

(4) Place the survey meter probe (shield open) about an inch from the vehicle surface, being careful not to make physical contact. The meter probe should be covered with one plastic bag cover to ensure that the probe itself does not become contaminated.

(5) Survey the vehicle, giving particular attention to the air filter, tires, fender wells, hood, grill, back of vehicle, windshield, radiator, floors (mats), steering wheel, seats, and pedals. If contamination is found, label the vehicle contaminated and proceed to Step B.7. below.

(6) Check the background reading on the survey meter. If the background readings are significantly different, the vehicle should be monitored again.

(7) If the contamination limits are met or exceeded, mark the appropriate area on the Monitoring Form (REP-9) and proceed with vehicle decontamination.

(8) If the vehicle is not contaminated, place a Clean Car Tag (REP-7) on the vehicle dashboard and park in the designated clean vehicle parking area. The Clean Car Tag should be initialed by the surveyor.

c. Primary Evacuee Monitoring.

(1) After leaving the vehicle, each evacuee will proceed to the primary monitoring station where the portal monitor will be located.

(2) Assign a recorder to keep a running log of evacuees waiting in the portal monitor line by name and social security number. The Evacuee Evaluation and Monitoring Form (REP-6) will only be filled out if the evacuee is found to be contaminated.

(3) Keep the line of persons waiting for the portal monitor at least 10 feet back from the monitor. Also, keep the sides of the portal monitor covered with saran wrap to prevent contamination from getting on the portal monitor detectors.

(4) Have the individual step into the portal monitor and wait 5 seconds.

(5) If the “contamination” alarm on the portal monitor sounds, then have the person step back and then step into the portal monitor to be scanned again (the first alarm may be a false

alarm). If the "clean' signal sounds, then the person is clean, and the first alarm was a false alarm. If the contamination alarm sounds again, then have the person move into the Secondary Monitoring Area.

(6) If the "clean" signal sounds, then give the evacuee a reception center pass and have them remove their booties using proper contamination control techniques. Dispose of removed booties in marked trash containers and proceed to the reception center registration area.

d. Secondary Evacuee Monitoring.

(1) Before and after each survey, note the background reading of the meter on the Evacuee Evaluation and Monitoring Form (REP-6).

(2) Have the individual stand with their legs spread slightly apart and with their arms straight out from their body.

(3) Place the survey meter probe (shield open) about 1 inch from the person's body, being careful not to make physical contact.

(4) Survey the individual carefully. Starting at the top of the head, move downward along the left side of the head, neck, collar, shoulder, out along the arm, wrist, hand, back under the arm, armpit, down the side of the body, leg, to the top of the shoe.

(5) Monitor the insides of the legs and on to the other side of the body in reverse sequence working up toward the head.

(6) Monitor the front and back of the body, then have the person lift one foot at a time, remove booties, and monitor the bottom of the shoes.

(7) Again, note the background reading on the survey meter. If the background readings before and after monitoring are significantly different, the individual should be monitored again.

(8) If the individual is clean, have them step off the monitoring area onto a clean surface. Complete an Evacuee Evaluation and Monitoring Form (REP-6). Give the evacuee copy along with a Reception Center Pass (REP-12) to the individual. Direct them to the reception area for registration.

(9) If the contamination limits are met or exceeded, have the individual put on booties. The booties will reduce the spreading of contamination as they walk to the decontamination

station. Complete an Evacuee Evaluation and Monitoring Form (REP-6) indicating on the form those areas of contamination.

(10) Place the completed Evacuee Evaluation and Monitoring Form (REP-6) in a large plastic baggie. Give the baggie to the individual going into the decontamination area. Instruct the individual that when he/she gets to the decontamination area, to open the baggie wide by pulling the sides of the baggie apart. The personnel in the decontamination area may reach inside (wearing a glove) and pull the report out, touching only the report so they don't touch the baggie and possibly become contaminated. Have the individual throw the baggie in the contaminated trash container.

3. DECONTAMINATION PROCEDURES.

a. Evacuee Vehicle Decontamination.

NOTE: There will be no evacuee vehicle decontamination during General Emergency conditions.

(1) All personnel involved in vehicle decontamination will wear rubber gloves, rubber boots, turnout coat and helmets with face guards turned down while performing decontamination.

(2) All water hose sprays used for washing down a vehicle should be directed toward the ground, if possible, and decontamination personnel should avoid the spray.

(3) Look over the Vehicle Monitoring Form (REP-9) to ascertain the areas of the vehicle (outside and inside) that need to be decontaminated.

(4) Decontaminate the inside of the vehicle, if required, first. This may be accomplished by:

(a) Wiping the area with a dry or damp cloth. Wipe the area once and then fold the cloth to present a clean area of the cloth. This will be a good method for:

- Dashboards
- Vinyl seats and floors
- Steering wheels
- In general, smooth surfaces

(b) Using masking tape, or equivalent, to lift the contamination from the surface. This will be a good method for:

- Cloth or velour seats
- Carpet
- Cloth headliners
- In general, rough surfaces

(c) Removal of the item that is contaminated. This will be a good method for:

- Rubber pedal covers
- Floor mats
- Objects that can be removed without dismantling the vehicle

(d) Decontaminate the outside of the vehicle after the inside has been decontaminated and monitored to ensure it is clean. Decontamination of the outside of the vehicle may be accomplished by:

- Wiping the area with a dry or damp cloth. Wipe the area once and then fold the cloth to present a clean area of the cloth. This will be a good method for:
  - Fenders, hood, trunk, roof, windshield, and glass areas
  - In general, smooth surfaces
- Using masking tape, or equivalent, to lift the contamination from the surface. This will be a good method for:
  - Vinyl roof
  - Some grills
  - In general, small areas that are difficult to wipe down

- Using water hose sprays to wash down the area. This will be a good method for:
    - Fender wells
    - Tires
    - Some grills
    - In general, areas that are difficult to clean otherwise
- Removal of the item that is contaminated. This will be a good method for:
    - Air filters
    - Ornaments attached to an antenna
    - Objects that can be removed without dismantling the vehicle

(e) Monitor and decontaminate again, if required.

(f) Remove vehicle from Decontamination Area and park in Clean Vehicle Parking Area. Place a Clean Car Tag (REP-7) green card on the vehicle dashboard. The Clean Car Tag should be initialed by the Vehicle Decon Recorder.

(g) Complete the Vehicle Monitoring Form (REP-9) showing that the vehicle has been decontaminated. Forward the paperwork to the supervisor.

b. Evacuee Decontamination

(1) Individuals who are contaminated need to be decontaminated. Only the area on the individual where contamination is found needs to be decontaminated. If only the hands are contaminated, then the individual needs only to wash the hands and be monitored again. Shoes, shirt, pants, etc. if contaminated need to be removed and monitor the area under these articles.

(2) Have the individual remove their articles (i.e., wallet, watch, keys, rings, etc.) and lay them on a flat surface. Monitor these articles. Avoid mixing contaminated articles with clean ones. Return the articles to the individual after he/she is clean, and the articles have been monitored and decontaminated, if necessary. Inventory the articles on a Personal Property Form (REP-5). Have the individual sign the inventory sheet for their property. Place contaminated articles in a plastic baggie and tag outside of the baggie with REP-5 Form.

(3) Only those individuals with contamination on many different areas of the body (under the clothing) need to take a full shower to decontaminate. If there are any questions about the extent of the contamination, have the individual take a full shower and monitor again.

(4) Any individual who is contaminated should wash with tepid (lukewarm) water and mild soap, being careful not to get the water in the eyes or mouth. If further, more careful decontamination is required, contact the SEOC and have them notify MSDH/DRH for assistance.

(5) Washing with lukewarm water and a mild soap will be a good method for:

- Hands
- Feet
- Hair
- Whole-body

(6) Using masking tape, or equivalent, to lift contamination off the surface will be a good method for:

- Mustache
- Beard
- Small areas on the arms and legs

(7) Removal of articles will be a good method for:

- Shoes

- Shirt
- Pants
- In general, articles of clothing

(8) Whatever method is used to decontaminate the individual, they must be monitored again to ensure that the contamination has been removed.

(9) After decontamination has been completed, fill out the rest of the Evacuee Evaluation and Monitoring Form (REP-6). Give the evacuee copy along with Reception Center Pass (REP-12) to the individual. Maintain the report for permanent record. The report should be forwarded to the registration desk at the reception center.

(10) Any clothing that is contaminated should be removed, placed in a heavy-duty garbage bag, which is labeled with a radiation caution sign/label. Label the bag with the REP-5 Form and notify Team Leader. It is the responsibility of GGNS to arrange for the proper disposal of contaminated clothing/materials.

c. Monitoring and Decontamination Area Closedown

(1) Once decontamination has been completed and the monitoring and decontamination station is to be closed, all personnel, equipment, and areas will be carefully monitored and decontaminated if necessary.

(2) The area will be surveyed with the survey meters and the results reported to the RECO at the SEOC. The decontamination team will follow MSDH/DRH advice for further actions.

(3) The SEOC will coordinate with the GGNS for the removal of all contaminated clothing/materials. **Contaminated items must be secured until picked up by the GGNS**.

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Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles) Tab A (Evacuee Evaluation and Monitoring Form (REP-6))

STATE OF MISSISSIPPI
EMERGENCY WORKER EVALUATION AND MONITORING FORM REP-6

NAME OF PERSON MONITORED: _____
SOCIAL SECURITY NUMBER: _____ _____ _____ – _____ _____ – _____ _____ _____ _____
ADDRESS: STREET: _____
CITY: _____ STATE: _____ ZIP: _____
TELEPHONE #: (_____) – _____ – _____

PROBABILITY OF CONTAMINATION: List below the places the evacuee has been today prior to the evacuation order.

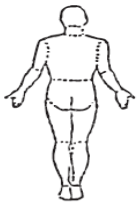
1. _____ 4. _____
2. _____ 5. _____
3. _____ 6. _____

RADIOLOGICAL MONITORING:
REQUIRED DUE TO RELEASE OCCURING IN ONR OR MORE OF THE AREAS ABOVE.
NOT REQUIRED DUE TO: NO RELEASE OCCURING AT THIS TIME.
HAS NOT BEEN IN AN AREA REQUIRING PROTECTIVE ACTION.

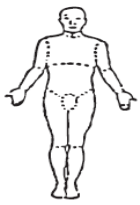
VEHICLE MONITORING TEAM LEADER'S SIGNATURE:

RADIOLOGICAL MONITORING REPORT: Denote contaminated areas numerically on figures below.

BACK



FRONT



MONITOR'S READINGS (mR/hr or cpm) BACKGROUND READINGS (mR/hr or cpm)

AREA	INITIAL	DECON 1	DECON 2	DECON 3
1				
2				
3				
4				
5				
6				

*NOTE: If above background refer to deconamination facility.

METHOD OF DECONTAMINATION: (Circle appropriate letter)
A. TAPE LIFT B. SOAP AND WATER C. DETERGENT D. OTHER _____

FURTHER ACTION REQUIRED:
_____ Decontamination complete. Refer to shelter for registration.
_____ Further decontamination necessary. Obtain transportation to _____ hospital.

PRIMARY PERSONNEL MONITOR INFORMATION:
NAME: _____
SIGNATURE: _____
INSTRUMENT SERIAL #: _____
CALIBRATION DATE: _____

SECONDARY PERSONNEL MONITOR INFORMATION:
NAME: _____
SIGNATURE: _____
INSTRUMENT SERIAL #: _____
CALIBRATION DATE: _____

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Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles) Tab B (Personal Property Form (REP-5))

STATE OF MISSISSIPPI
PERSONAL PROPERTY FORM REP-5 15102

NAME:_____
ADDRESS: Street _____
City _____ State____ Zip _____
Telephone: ( )_____

PROPERTY SECURED FOR DECONTAMINATION
The following contaminated items have been left for decontamination at the _____ Shelter.

ITEM DESCRIPTION & CONDITION	OWNER'S ESTIMATED VALUE

I certify the above list of property left at the shelter and their corresponding values to be accurate to the best of my knowledge. I further certify that I understand that the property listed above will be transferred to a third party for decontamination and agree to hold harmless the State of Mississippi, MEMA, its employees and designees for any damages to same. I also understand that if this property can not be decontaminated it will not be returned to me.

DATE:_____
SIGNATURE OF OWNER _____
SIGNATURE OF SHELTER STAFF_____

* If additional space is needed continue on a separate form.
Attach BUFF copy to bag, Give CANARY copy to the owner and Keep WHITE copy for the Decontamination Center.

PROPERTY RELEASE FORM-REP 5.A 15102

I hereby state that I am again in full possession of my personal property. I further certify that the property has been returned to me in an acceptable condition.

DATE:_____ SIGNATURE _____
WITNESS _____

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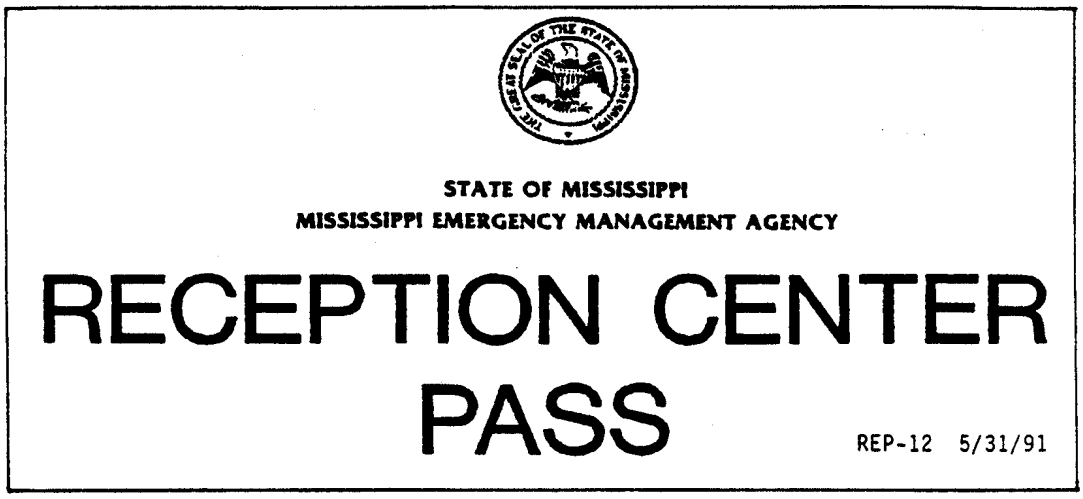
Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles) Tab C (Reception Center Pass (REP-12))



STATE OF MISSISSIPPI
MISSISSIPPI EMERGENCY MANAGEMENT AGENCY

RECEPTION CENTER PASS

REP-12 5/31/91

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Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles)
Tab D (Vehicle Monitoring Form (REP-9))

STATE OF MISSISSIPPI
VEHICLE MONITORING FORM REP-9

DATE:	MAKE:	MODEL:
COLOR:	YEAR:	VEHICLE ID #:

OWNER INFORMATION
NAME: _____
ADDRESS: Street: _____
City: _____ State: _____ Zip: _____
TELEPHONE: (_____) – _____ – _____

MONITOR'S READINGS (mR/hr or cpm) BACKGROUND READINGS (mR/hr or cpm)

AREA	INITIAL*	DECON 1	DECON 2	DECON 3
ROOF				
HOOD				
GRILL				
DOOR HANDLES				
INSIDE DRVR.				
INSIDE PASS.				
OUTSIDE DRVR.				
OUTSIDE PASS.				
WHEEL WELLS				
FRONT DRVR.				
FRONT PASS.				
BACK DRVR.				
BACK PASS.				
FLOOR BOARDS				
FRONT DRVR.				
FRONT PASS.				
BACK DRVR.				
BACK PASS.				
FLOOR BOARDS				
FRONT DRVR.				
FRONT PASS.				
STEERING WHEEL				
GEAR SELECTOR				
DASHBOARD				
WINDOW HANDLES				
DRIVER				
PASS.				

*NOTE: If above background refer to deconamination facility.

METHOD OF DECONTAMINATION: (Circle appropriate letter)

A. MASKING TAPE/DAMP CLOTH/SPONGE B. LIGHT WATER SPRAY/BRUSH
C. DETERGENT/BRUSH/SPRAY

FURTHER ACTION REQUIRED:
_____ Decontamination complete. Refer to clean parking.
_____ Further decontamination necessary. Refer to contaminated parking.
Wait for instructions from SDH/DRH personnel.

PRIMARY MONITOR'S SIGNATURE: _____
INSTRUMENT SERIAL #: _____ CALIBRATION DATE: _____

SECONDARY MONITOR'S SIGNATURE: _____
INSTRUMENT SERIAL #: _____ CALIBRATION DATE: _____

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Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles)
Tab E (Vehicle Monitoring Log (REP-8))

STATE OF MISSISSIPPI VEHICLE MONITORING LOG REP-8						
PRELIMINARY INFORMATION				DECON INFORMATION		
VEHICLE ID #	OWNER'S NAME	CLEAN/CONTAMINATED	INTLS	DATE	TIME	INITIAL

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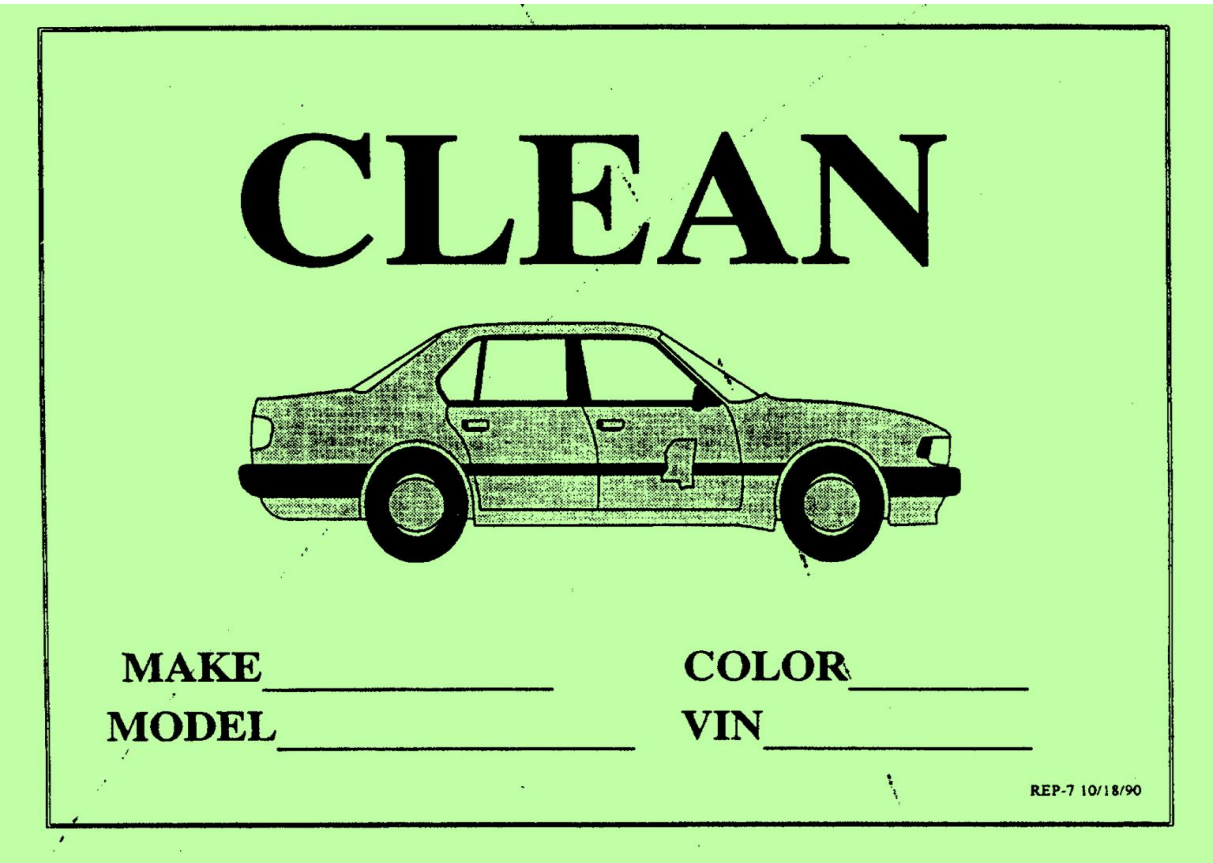
Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures for People and Vehicles)
Tab F (Clean Car (Green) Tab (REP-7))



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Annex G (Radiological Exposure Control)
Appendix 3 (Evacuee Monitoring and Decontamination Procedures For People and Vehicles)
Tab G (Reception Center Supply Inventory)

There are storage containers and waste containers stocked and available for immediate use. Five storage and three waste containers are located in each of the four Host counties. These supplies are stored at the Civil Defense/Emergency Management offices in Warren County, Copiah County, Adams County, and Hinds County. They will be transferred to specific Reception Center locations for exercise or emergency operations.

ITEM/DESCRIPTION	NUMBER AVAILABLE
Emergency Worker Supplies – Kit No. 1	
24 x 18 x17 Storage Container	4
Tyvek Suits	96
Latex Over boots	48
Disposable Plastic Tie Boots (pair)	100
Latex Gloves (pair)	600
Dust Face Mask	120
Masking Tape (roll)	16
Rubber Bands (box)	4
Ball Point Pens	48
Disposable Hand Towels	180
Rad Exposure Control Procedures Manual	8
Monitoring & Decon Operations Handbook	8
Cable Ties	40
Evacuee Supplies – Kit No. 2	
24 x 18 x 17 Storage Container	4
Tyvek Suits	92
Tyvek Coats – White	20
Tyvek Infant Shirts	24
Paper Shoe Covers (pair)	100
Disposable Plastic Tie Boots (pair)	200

Rubber Bands (box)	4
Disposable Hand Towels	180
Disposable Bath Towels	200
Ziplock Storage Bags (gallon size)	400
Rad Exposure Control Procedures Manual	8
Monitoring and Decon Operations Handbook	8
Cable Ties	40

Decon Supplies – Kit No. 3

24 x 18 x 17 Storage Container	4
Latex Gloves (pair)	600
Disposable Hand Towels	180
Disposable Bath Towels	800
Cable Ties	40

Extra Supplies – Kit No. 4

24 x 18 x 17 Storage Container	4
Disposable Plastic Tie Boots (pair)	300
Latex Gloves (pair)	1200
Masking Tape (roll)	8
Ball Point Pens	48
Ziplock Storage Bags (gallon size)	280
Soap Dispensing Paper Cups	800
Disposable Bath Towels	400
Cable Ties	40

Forms – Kit No. 5

24 x 18 x 17 Storage Container	4
Personal Radiation Exposure Card/REP-1	2000
Permanent Radiation Exposure Record/REP-2	2000
Personal Property Form/REP-5	13200
Evacuee Evaluation and Monitoring Form/REP-6	15600
Clean Car (Green) Tag/REP-7	12000
Vehicle Monitoring Log/REP-8	12500
Vehicle Monitoring Form/REP-9	15600
Emergency Worker Evaluation & Monitoring Form/REP-11	2000

Reception Center Pass/REP-12	4000

Monitoring/Male Decon/Female Decon Waste Containers

32 Gallon Waste Container with Lid	12
Waste Container Roller Caster	12
33 Gallon Plastic Trash Bags	600
Trash Bag Wire Ties	600
Liquid Soap (gallon)	8
Soap Dispensing Paper Cups	1600
Adhesive Lane Arrow Markers (Blue & Red)	800
Nylon Radioactive Warning Rope (foot)	800
Reeled Barricade Tape “Caution Radiation Area” (feet)	4000
Signs “Caution Radiation Area”	48
Self-Adhesive Signs “Caution Radiation Hazard”	24
Contamination Labeling Tape “Radioactive” (roll)	12
Warning Tags “Caution Radioactive Material”	16
Poster “Surveying for Contamination”	4
Poster “General Decontamination”	4
Poster “Local Decontamination”	4
Poster “Hair Decontamination”	4
Poster “Fixed Decontamination”	4
Poster “When to Refer to the Hospital”	4
Poster “Disposal of Radioactive Waste”	4

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Annex G (Radiological Exposure Control)
Appendix 4 (Emergency Worker Monitoring and Decontamination Procedures for People and Vehicles)

1. GENERAL. This procedure details the methods and equipment to be used to monitor emergency workers and their vehicles for radiological contamination upon their arrival at an Emergency Worker Decontamination Station.

a. Use the low-range survey instrument.

(1) Open the instrument and install batteries.

(2) Check the instrument for operability using a check source.

b. Precautions

(1) Monitors should wear gloves and booties when monitoring vehicles and personnel.

(2) Protect the probe from contamination by placing a single plastic bag cover over the probe.

(3) If contamination is measured above local background, notify Team Leader immediately after emergency worker decontamination.

(4) Ensure that background levels of radiation are accounted for when conducting contamination surveys. Normal background radiation is approximately 25-35 CPM.

(5) All contaminated disposable items will be placed in a heavy-duty garbage bag for disposal and labeled with a radiation sign.

(6) Any emergency worker in the monitoring and decontamination area whose dosimeter reads 1 R or greater will report this information to his/her supervisor. Dosimeters should be read at least every 30 minutes unless directed to read them more frequently.

(7) No eating, drinking, or tobacco use in the monitoring and decontamination area.

2. MONITORING PROCEDURES.

a. Preliminary actions: Emergency Worker Vehicle Arrival

(1) All emergency worker vehicles arriving at the Emergency Worker Decontamination Station will be monitored and logged in using the Vehicle Monitoring Log (REP-8).

(2) The driver will remain in the vehicle until the outside of the vehicle is monitored.

(3) Remove passengers as per driver bootie instructions in Steps 4.a. and 4.b. below. Passengers are then escorted directly to the personnel monitoring station.

(4) If the outside of the vehicle is found to be contaminated:

(a) Have the driver open the door and swing his/her feet out. Do not allow the driver to touch his/her feet to the ground.

(b) Have the driver put on booties before stepping out of the vehicle.

(c) Have the driver stand to the side of the vehicle while monitoring the inside of the vehicle.

(d) Fill out a Vehicle Monitoring Form (REP-9). The report is held with the others until the vehicle is decontaminated.

(e) Have the driver get back in the vehicle after the monitoring of the inside is completed, and the vehicle is moved to the Contaminated Vehicle Parking Area.

(f) When the vehicle is parked, have the driver swing his/her feet out and put a clean pair of booties on over the pair already on his/her feet.

(g) Escort the driver directly to the Primary Monitoring Station.

(5) If the outside of the vehicle is not contaminated:

(a) Have the driver open the door and swing his/her feet out. Do not allow the driver to touch his/her feet to the ground.

(b) Have the driver put on booties before stepping out of the vehicle.

(c) Have the driver stand to the side of the vehicle while the inside of the vehicle is monitored.

(d) If the inside of the vehicle is contaminated, have the driver get back in the vehicle and move the vehicle to the Contaminated Vehicle Parking Area.

(e) Fill out a Vehicle Monitoring Form (REP-9). Hold the report with the others until the vehicle is decontaminated.

(f) When the vehicle is parked, have the driver swing his/her feet out and put a clean pair of booties on over the pair already on his/her feet.

(g) Escort the driver directly to the Primary Monitoring Station.

(h) If the inside of the vehicle is not contaminated, place a Clean Car Tag (REP-7) green card on the vehicle dashboard. The Clean Car Tag should be initialed by the Vehicle Decon Recorder. Have the driver park the vehicle in the designated Clean Vehicle Parking Area and escort him/her directly to the Primary Monitoring Station.

b. Emergency Worker Vehicle Monitoring

(1) Use the low range survey instrument.

(2) Perform an operational check on the survey meter.

(3) Wear gloves and booties when monitoring vehicles.

(4) Place the survey meter probe about an inch from the vehicle surface, being careful not to make physical contact. The meter probe should be covered with one plastic bag cover to ensure that the probe itself does not become contaminated.

(5) Survey the vehicle, giving particular attention to tires, fender wells, hood, grill, back of vehicle, windshield, air filter, radiator, floors (mats), steering wheel, seats, and pedals. **If contamination is found in the air filter, immediately label the vehicle contaminated and proceed to Step B.7.**

(6) Again, note the background reading on the survey meter. If the background readings are significantly different, the vehicle should be monitored again.

(7) If the contamination limits are met or exceeded, complete the Vehicle Monitoring Form (REP-9) and move the vehicle to the Contaminated Vehicle Parking Area.

c. Emergency Worker Personnel Monitoring

(1) Before and after each survey, note the background reading of the meter on the Emergency Worker Evaluation and Monitoring Form (REP-11).

(2) Have the individual stand with their legs spread slightly apart and with their arms straight out from their body.

(3) Place the survey meter probe about 1 inch from the person's body, being careful not to make physical contact.

(4) Survey the individual carefully. Starting at the top of the head, move downward along the left side of the head, neck, collar, shoulder, out along the arm, wrist, hand, back under the arm, armpit, down the side of the body, leg, to the top of the shoe.

(5) Monitor the insides of the legs and on to the other side of the body in reverse sequence working up toward the head.

(6) Monitor the front and back of the body, then have the person lift one foot at a time, remove booties, and monitor the bottom of the shoes.

(7) Again, note the background reading on the survey meter. If the background readings before and after monitoring are significantly different, the individual should be monitored again.

(8) If the individual is clean, have them step off the monitoring area onto a clean surface and complete an Emergency Worker Evaluation and Monitoring Form (REP-11). Direct emergency workers back into service if exposure limits have not been reached.

(9) If the contamination limits are met or exceeded, have the individual put on booties. The booties will reduce the spreading of contamination as they walk to the decontamination station. Complete an Emergency Worker Evaluation and Monitoring Form (REP-11).

(10) Place the completed Emergency Worker Evaluation and Monitoring Form (REP-11) in a large plastic baggie. Give the baggie to the individual going to the decontamination area. Instruct the individual that when he/she gets to the decontamination area, to open the baggie wide by pulling the sides of the baggie apart. The personnel in the decontamination area may reach inside (wearing a glove) and pull the report out, touching only the report so they don't touch the baggie and possibly become contaminated. Have the individual throw the baggie in the contaminated trash container.

(11) Have the individual remove their articles (i.e., wallet, watch, keys, rings, etc.) and lay them on a flat surface. Monitor these articles. Avoid mixing contaminated articles with clean ones. Use a separate plastic bag and inventory sheet for clean and contaminated articles. Return the articles to the individual after he/she is clean, and the articles have been monitored and decontaminated, if necessary. Inventory the articles on a Personal Property (REP-5) Form. Have the individual sign the inventory sheet for their property. Place contaminated articles in a plastic baggie and tag outside of the baggie with REP-5 Form.

(12) Remove all dosimetry including all self-reading dosimeters, TLD cards and/or film badge from the emergency worker. Monitor and bag these articles following the procedure in Step 11. Ensure that the final dosimeter reading has been entered on the Personal Radiation Exposure Card (REP-1) by checking the current reading on the dosimeter(s). If the reading is 1R or greater, report reading to your supervisor immediately. All dosimetry will be transferred to the RECO at the SEOC.

3. DECONTAMINATION PROCEDURES.

a. Emergency Worker Vehicle Decontamination.

(There will be no emergency worker vehicle decontamination during General Emergency conditions unless the vehicle is needed for immediate use.)

(1) All personnel involved in vehicle decontamination will wear rubber gloves, rubber boots, turnout coat and helmets with face guards turned down while performing decontamination.

(2) All water hose sprays used for washing down a vehicle should be directed toward the ground, if possible, and decontamination personnel should avoid the spray.

(3) Look over the Vehicle Monitoring Form (REP-9) to ascertain the areas of the vehicle (outside and inside) that need to be decontaminated.

(4) Decontaminate the inside of the vehicle, if required, first. This may be accomplished by:

(a) Wiping the area with a dry or damp cloth. Wipe the area once and then fold the cloth to present a clean area of the cloth. This will be a good method for:

- Dashboards
- Vinyl seats and floors

- Steering wheels
- In general, smooth surfaces

(b) Using masking tape, or equivalent, to lift the contamination from the surface. This will be a good method for:

- Cloth or velour seats
- Carpet
- Cloth headliners
- In general, rough surfaces

(c) Removal of the item that is contaminated. This will be a good method for:

- Rubber pedal covers
- Floor mats
- Objects that can be removed without dismantling the vehicle

(5) Decontaminate the outside of the vehicle after the inside has been decontaminated and monitored to ensure it is clean. Decontamination of the outside of the vehicle may be accomplished by:

(d) Wiping the area with a dry or damp cloth. Wipe the area once and then fold the cloth to present a clean area of the cloth. This will be a good method for:

- Fenders, hood, trunk, roof, windshield, and glass areas
- In general, smooth surfaces

(e) Using masking tape, or equivalent, to lift the contamination from the surface. This will be a good method for:

- Vinyl roof
- Some grills

- In general, small areas that are difficult to wipe down

(f) Using water hose sprays to wash down the area. This will be a good method for:

- Fender wells
- Tires
- Some grills
- In general, areas that are difficult to clean otherwise

(g) Removal of the item that is contaminated. This will be a good method for:

- Air filters
- Ornaments attached to an antenna
- Objects that can be removed without dismantling the vehicle

(6) Monitor and decontaminate again, if required.

(7) Remove vehicle from Decontamination Area and park in Clean Vehicle Parking Area. Place a Clean Car Tag (REP-7) green card on the vehicle dashboard. The Clean Car Tag should be initialed by the Vehicle Decon Recorder.

(8) Complete the Vehicle Monitoring Form (REP-9) showing that the vehicle has been decontaminated. Forward the paperwork to the supervisor.

b. Emergency Worker Decontamination

(1) Individuals who are contaminated need to be decontaminated. Only the area on the individual where contamination is found needs to be decontaminated. If only the hands are contaminated, then the individual needs only to wash the hands and be monitored again. Shoes, shirt, pants, etc. if contaminated need to be removed and monitor the area under these articles.

(2) Only those individuals with contamination on many different areas of the body (under the clothing) need to take a full shower to decontaminate. If there are any questions about the extent of the contamination, have the individual take a full shower and monitor again.

(3) Any individual who is contaminated should wash with lukewarm water and mild soap, being careful not to get the water in the eyes or mouth. If further, more careful decontamination is required, contact the SEOC and have them notify MSDH/DRH for assistance.

(4) Washing with tepid (lukewarm) water and a mild soap will be a good method for:

- Hands
- Feet
- Hair
- Whole-body

(5) Using masking tape, or equivalent, to lift contamination off the surface will be a good method for:

- Mustache
- Beard
- Small areas on the arms and legs

(6) Removal of articles will be a good method for:

- Shoes
- Shirt
- Pants
- In general, articles of clothing

(7) Whatever method is used to decontaminate the individual, they must be monitored again to ensure that the contamination has been removed.

(8) After decontamination has been completed, fill out the rest of the Emergency Worker Evaluation and Monitoring Form (REP-11). Maintain the report for permanent record. The report should be forwarded to your supervisor.

(9) Any clothing that is contaminated should be removed, placed in a heavy-duty garbage bag that is labeled with a radiation caution sign/label. Label the bag with the REP-5 Form and notify Team Leader. It is the responsibility of GGNS to arrange for the proper disposal of contaminated clothing/materials.

c. Monitoring and Decontamination Area Decontamination Closedown

(1) Once decontamination has been completed and the monitoring and decontamination station is to be closed, all personnel, equipment, and areas will be carefully monitored and decontaminated if necessary.

(2) The area will be surveyed with the survey meters and the results reported to the RECO at the SEOC. The decontamination team will follow MSDH/DRH advice for further actions.

(3) The SEOC will arrange to have GGNS remove all contaminated clothing/materials. Contaminated items must be secured at the Emergency Worker Decon Station until picked up by GGNS.

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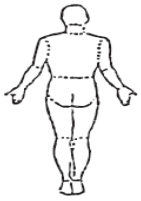
Annex G (Radiological Exposure Control)
Appendix 4 (Emergency Worker Monitoring and Decontamination Procedures for People and Vehicles)
Tab A (Emergency Worker and Monitoring (REP-11))

STATE OF MISSISSIPPI
EMERGENCY WORKER EVALUATION AND MONITORING FORM REP-11

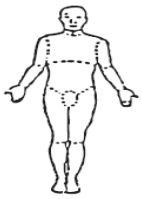
NAME OF PERSON MONITORED: _____
SOCIAL SECURITY NUMBER: ____ ____ ____-____ ____-____ ____ ____ ____
ADDRESS: STREET: _____
CITY: _____ STATE: _____ ZIP: _____
TELEPHONE #: (_____) – _____ – _____

RADIOLOGICAL MONITORING REPORT: Denote contaminated areas numerically on figures below.

BACK



FRONT



MONITOR'S READINGS (mR/hr or cpm) BACKGROUND READINGS (mR/hr or cpm)

AREA	INITIAL	DECON 1	DECON 2	DECON 3
1				
2				
3				
4				
5				
6				

METHOD OF DECONTAMINATION: (Circle appropriate letter)
A. TAPE LIFT B. SOAP AND WATER C. DETERGENT
D. OTHER: _____

FURTHER ACTION REQUIRED:
_____ Decontamination complete.
_____ Further decontamination necessary. Obtain transportation to _____ hospital.

PRIMARY PERSONNEL MONITOR INFORMATION:
NAME: _____
SIGNATURE: _____
INSTRUMENT SERIAL #: _____
CALIBRATION DATE: _____

SECONDARY PERSONNEL MONITOR INFORMATION:
NAME: _____
SIGNATURE: _____
INSTRUMENT SERIAL #: _____
CALIBRATION DATE: _____

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Annex G (Radiological Exposure Control)
Appendix 4 (Emergency Worker Monitoring and Decontamination Procedures for People and Vehicles)
Tab B (Emergency Worker Decon Station Locations)

PRIMARY STATIONS

Claiborne County*

Name:	Hermanville-Claiborne County Fire Department	
Location:	½ mile off Hwy 18 East, Hermanville	
Telephone:	535-2222	437-4684
Contact:	Fire Chief	EMA Director

Name:	Pattison-Claiborne County Fire Department	
Location:	½ block off Hwy 547 South, Pattison	
Telephone:	437-3021	437-4684
Contact:	Fire Chief	EMA Director

Warren County*

Name:	Vicksburg Fire Department – Station No. 5	
Location:	Hwy 61, Vicksburg Municipal Airport	
Telephone:	636-4500	636-1603
Contact:	Fire Chief	Fire Chief

Note: Backup Emergency Worker Decon Stations are located at the Reception Centers of host counties while they are in operation. These counties include Warren, Adams, Hinds, and Copiah.

*Claiborne County and Warren County Civil Defense/EMA will be notified by the SEOC at Site Area Emergency (SAE) to begin activation of their respective Emergency Worker Decon Stations to assure they are fully staffed should conditions escalate to GE.

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Annex G (Radiological Exposure Control)
Appendix 4 (Emergency Worker Monitoring and Decontamination Procedures for People and Vehicles)
Tab C (Procedures for Issuing Emergency Worker Dosimetry and KI (RECO)

The state and local Radiation Exposure Control Officer (RECO) is responsible for emergency worker exposure control equipment issuance at the SEOC and County EMA control. The duties of the state RECO will be performed by the MEMA Radiological Training Coordinator or designee, while the Local RECOs are designated or requested by each of the risk and host county EMA Directors. The following procedures are to be followed by each RECO upon reporting:

1. RECO ASSIGNMENTS.

a. Upon notification, REP County will assign a Local RECO and the State EOC will establish a RECO Lead.

b. Each Local RECO has a direct line of communications with the MEMA RECO Lead but will ensure each EMA Director has Situational Awareness of all re-entry processes and issues.

c. The Claiborne County EMA is responsible for Local RECO activities in Claiborne County for all responding agencies originating from Claiborne County as well as bus drivers. This duty requirement includes emergency responders reporting back to the same location Local RECO for shift change, mission completion, or mission changes.

d. The other REP County EMA managers (Adams, Copiah, Hinds, Warren), are responsible to establish a Local RECO for all responding agencies originating from their county. This duty requirement includes emergency responders reporting back to the same location Local RECO for shift change, mission completion, or mission changes.

e. All other responding agencies that originate from outside the five (5) REP Counties above, will report to the MEMA RECO Lead for processing and admittance into the Restricted Area. This duty requirement includes emergency responders reporting back to the same location Local RECO for shift change, mission completion, or mission changes

2. ALERT/SITE AREA EMERGENCY.

a. Upon notification, each Local and State MEMA RECO will proceed to their assigned location.

b. Obtain self-reading dosimetry (SRDs) and TLDs from the storage area and inventory the equipment according to the inventory list included. If shortages exist, contact the RECO Lead at MEMA for additional supplies)

c. Ensure control TLDs are in place.

d. Obtain the Potassium Iodide (KI) from the MSDH/DRH county or state representative upon their arrival at the SEOC and inspect it.

- Check the expiration date.
- Check container condition.

e. Prepare a dosimeter charger for use per instruction on the charger case.

f. Zero the SRDs using the charger.

g. Prepare dosimetry and KI for distribution to emergency workers. Each emergency worker shall receive:

- 1 SRD (0 to 200 mR)
- 1 SRD (0 to 20 R)
- 1 TLD
- 1 Box of KI tablets
- REP-1 cards

h. Screen workers to ensure they are not allergic to iodine.

i. Open and maintain a Local EMA or MEMA RECO event log of activities.

j. As emergency workers report to each RECO location, before deploying to the field, issue the dosimetry and KI. Brief each emergency worker on filling out the Personal Radiation Exposure Card (REP-1) by recording their name, agency, home address, and social security number and the serial numbers of the two dosimeters and the TLD in the proper places on the form. Emergency

Workers should also record the initial readings of each of the SRDs. **Emergency Worker Turn Back Value is 1R.**

3. GENERAL EMERGENCY

a. Advise emergency worker supervisors to prompt their workers to read their SRDs every 30 minutes.

b. Coordinate with MSDH/DRH representatives in the County EOC to facilitate the flow of emergency worker exposure control information.

c. Periodically update MEMA RECO on emergency worker exposure activities.

d. Take the following actions if MSDH/DRH directs taking KI:

(1) Record the time and specific order.

(2) Contact all supervisors and pass on the directive.

(3) If any supervisor reports anyone with adverse effects, advise the supervisor to have the emergency worker report to the nearest reception center or decontamination station, then to the River Region Medical Center.

(4) Advise the MSDH/DRH representative of the situation.

e. Local EMAs will provide exposure information to the MEMA Executive Director and the MSDH/DRH representative coordinating information with each County RECO and the RECO Lead at MEMA.

4. EMERGENCY WORKER MISSION/SHIFT COMPLETED

a. After the emergency worker's mission has terminated or the emergency worker has finished a shift, direct them to an emergency worker decontamination station for monitoring and dosimetry turn-in.

b. If the emergency worker is completed with any operations on the entire response, each Local RECO will forward the TLDs to the RECO Lead at MEMA.

c. If the emergency worker has reached their annual allowable limit of 5 R on their SRD

equipment, their work is completed for the mission and equipment will be turned in and TLDs forwarded by each Local RECO to the RECO Lead at MEMA for processing.

d. If the emergency worker has not completed their mission and has not reached their allowable limit of 5R on their SRD, and merely is awaiting new mission orders or shift change, each Local RECO will inventory dosimetry equipment and have the retain the TLD in a controlled environment for re-issue back to the same Emergency Worker for their next duty day.

e. Local RECO will inventory dosimetry equipment periodically throughout each day and report missing items to the RECO Lead at MEMA and the MEMA REP Program Manager will be notified thereafter.

Annex G (Radiological Exposure Control)
Appendix 5 (Potassium Iodide (KI) Policy)

1. POLICY FOR EMERGENCY WORKERS.

a. General.

(1) Based on the conditions at the time of a fixed nuclear facility accident, the State Health Officer SHO/MSDH will consider certain criteria for the administration of potassium iodide (KI) and may recommend its use for emergency workers.

(2) Risk and protective factors associated with the use of KI will be considered. The SHO/MSDH will advise MEMA on this matter at the time of the accident. Accident assessment information such as the expected duration and type of release and the areas affected will be considered along with reaction time available and support logistics.

(3) Iodine accumulates in the thyroid gland, which is located at the front base of the neck just below the larynx (Adam's Apple). Radioactive iodine will also accumulate in the thyroid gland in high concentrations. Taking KI will have the effect of saturating the thyroid gland with iodine so that radioiodine (radioactive iodine) will not lodge there in a large quantity. Hence, KI lowers the risk to the thyroid gland.

(a) The toxicity level of KI is very low and the dangers in taking this drug are considered to be minimal. Nonetheless, individuals should not take more than the recommended dose. Although side effects to KI are unlikely because of the low dose and the short period it will be taken, some side effects are possible. The side effects may include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, cold symptoms, and sometimes gastrointestinal symptoms). A few people may have an allergic reaction with more serious symptoms. These symptoms could be elevated temperature, joint pains, swelling of the face and body, and at times severe shortness of breath, which requires immediate medical attention. Individuals who know they are allergic to iodine should not take KI.

(b) The effectiveness of KI as a thyroid blocking agent is greatest if administered **before** the time of exposure to radioiodine, but some exposure saving can be obtained by administration shortly after exposure.

(c) Emergency workers, who may experience a severe reaction to KI, as determined by their private physicians, should be evacuated from the plume exposure pathway EPZ before or immediately upon issuance of the advisory to take KI.

b. Projected Dose Rates. At a projected dose of less than 5 Rem child thyroid dose, the use of KI will not be generally considered. However, the circumstances surrounding the accident may indicate that KI is administered as a precautionary measure.

	Predicted Thyroid gland exposure (cGy) (1 cGy = 1 rem)	KI dose (mg)	Number or fraction of 130 mg tablets	Number or fraction of 65 mg tablets
Adults over 40 years	≥ 500	130	1	2
Adults over 18 through 40 years	≥ 10			
Pregnant or lactating women	≥ 5			
Adolescents, 12 through 18 years[a]		65	1/2	1
Children over 3 years through 12 years				
Children over 1 month through 3 years		32	Use KI oral solution[b]	1/2
Infants birth through 1 month		16	Use KI oral solution[b]	Use KI oral solution[b]

[a] Adolescents approaching adult size (≥ 150 pounds) should receive the full adult dose (130 mg).

[b] Potassium iodide oral solution is supplied in 1 ounce (30 mL) bottles with a dropper marked for 1, 0.5, and 0.25 mL dosing. Each mL contains 65 mg potassium iodide.

Source: FDA, "Guidance: Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies" (December 2001): http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM080542.pdf (FDA 2001); and FDA, Frequently Asked Questions on Potassium Iodide (KI): http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm072265.htm (Last Updated: 10/27/2014).

c. Storage and Distribution.

(1) ThyroSafe is the brand name of the KI tablets procured by the MSDH for emergency workers. A box of ThyroSafe consists of 20 tablets of 65 milligrams in size; the dose is two tablets per day while a radioiodine threat exists.

(2) ThyroSafe will be stored in sufficient quantities and distributed only to properly credentialed and authorized Emergency Workers. Storage locations and distribution locations are listed at Tab A, this Appendix.

d. Criteria for the Administration for KI.

(1) KI in tablet form is available to emergency management agencies, police departments, fire companies, ambulance services, farmers keeping livestock, and selected industrial workers and to hospitals and nursing homes located within the 10-mile EPZ. Claiborne County will specify in their plan those facilities, municipalities, agencies, and teams that receive KI for use by emergency workers. **KI will only be made available to evacuees in the shelter in the event of**

a rapidly escalating event and only upon authorization of the State Health Officer.

(2) Each potential emergency worker should be screened annually for sensitivity to an allergic reaction to KI. Those individuals who are determined to be iodide sensitive should not be assigned duties, which would require them to enter the affected area. Iodine Sensitivity Questionnaire (REP-3) can be found at Tab B, this Appendix.

(3) REP-3 Forms (Iodine Sensitivity Questionnaire) are to be completed by each perspective emergency worker and turned into his/her supervisor. Each agency/organization is then responsible for keeping the REP-3 Forms updated annually and assuring that only those individuals indicating NO allergic sensitivity to iodine function as emergency workers.

(4) No KI is to be issued to emergency workers without an express order by the State Health Officer (SHO), or his designee. The SHO is charged with the decision to advise use, or not to use, KI in an accident. The decision criteria made in conjunction with MSDH/DRH, include radioiodine dose projections, exposure savings, risk factors, and accident assessment information.

(5) The actual order to take KI will be given by the SHO through the SEOC down through each emergency response agency/organization to the emergency workers.

(6) The doses to be administered shall conform to the applicable standards of the USDA.

(7) KI should be taken only on the advice of the SHO/MSDH. Upon taking KI, the emergency worker will record this information on the Personal Radiation Exposure Card, (REP-1) found in Appendix 1, this Annex.

2. POLICY FOR DISTRIBUTION TO GENERAL PUBLIC.

a. General. The Mississippi State Department of Health (MSDH), in coordination with the Mississippi Emergency Management Agency (MEMA), has elected to include potassium iodide (KI) as an adjunct to the protective measures of evacuation, sheltering-in-place, and protective food supply if radioactive iodine is released during an incident at GGNS. KI is used to saturate the normal human thyroid gland with stable iodine, which limits the uptake of radioactive iodine by the thyroid when ingested or inhaled. KI does not limit the uptake of the radioactive iodine by other body organs and offers no protection against exposure of the body (including the thyroid) to radiation originating outside the body. For optimal protection against inhaled radioiodines, KI should be administered before or immediately coincident with passage of the radioactive cloud, but even if taken 3 or 4 hours after exposure, KI may still have a substantial protective effect. This procedure establishes methods for procurement, deployment, storage, and distribution of KI to the general public within the risk area of GGNS.

b. Administration Policy. In the event of an incident at GGNS involving the release of radioactive material, all efforts will be made to evacuate the general population before exposure. However, in a fast-breaking emergency, such measures may not be feasible. Under such conditions, it is MSDH's goal that any radiation exposure to the general population is as low as reasonably achievable (ALARA). If the general population is exposed to radioiodine during an emergency at GGNS, MSDH through the local county health departments (CHD) will provide KI at the reception centers to supplement the protective measures of evacuation and sheltering-in-place, per the FDA procedural guidance document, Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies dated December 2001.

c. Guidance. The FDA recommendation for administration of KI is based on age, predicted thyroid exposure, and pregnancy and lactation status. The MSDH will follow the FDA recommendations as listed in Table 1 (Appendix 5, Tab D), but recognizes that, in the event of an emergency, some or all of the specific dosing recommendations may be very difficult to carry out given their complexity and the logistics of implementation of a program of KI distribution. The FDA recommendations will therefore be interpreted with flexibility as necessary to allow optimally effective and safe dosing given the exigencies of any particular emergency.

d. Available Stock. To provide for the issuance of the KI to the general population[1] in the risk area, including the transient population, a total of 45,000 65-milligram tablets (enough for 20,000 adult doses and 5,000 child doses) have been procured through the U.S. Nuclear Regulatory Commission. These doses will be strategically stored in the designated host counties of Adams, Copiah, Hinds, and Warren.

e. Storage. The KI is stored between 59 and 86 degrees F, with containers tightly closed and protected from light. The County Coordinating Nurse (CCN) will ensure that the KI is properly stored, and its shelf life has not been exceeded. The Division of Radiological Health (DRH) will also maintain records on the expiration dates of the on-hand supplies of KI. When the shelf life nears expiration, the DRH will procure a new supply.

f. Dispersal.

(1) On the declaration of an "Alert", the MSDH/ Emergency Planning and Response (EPL) will notify the appropriate county health departments (CHD) within the designated host counties of Adams, Copiah, Hinds, and Warren to activate their KI distribution plan. The CHD representatives will collect their supplies of KI and consent forms and prepare for departure. At the declaration of Site Area Emergency (or General Emergency in a fast-breaking emergency), the

CHD personnel will depart to the assigned reception center. Upon arrival, they will set up a KI distribution station and report to EPL at the State Emergency Operation Center (SEOC) and the county EOC that the station is operational. This information will be relayed to the DRH Director or his designee in the SEOC.

(2) If the general public is evacuated, a release of radioactive material occurs, and the actual or projected thyroid dose from radioactive iodine meets the FDA guidance limits in Table 1, the State Health Officer (SHO) will authorize the dispersal of KI at reception centers per standing orders. This message will be relayed through the (MEMA) Operations Officer or his designee to the appropriate Emergency Management Agencies. EPL at the SEOC will also notify the county health departments (CHD) to dispense KI to the general public.

g. Consent Forms. The public receiving KI will sign a consent form. REP 3-A (Appendix 5, Tab E) Iodine Sensitivity/ Consent/ Waiver form, indicating they understand the benefits, hazards, and dosage instructions. Parents or guardians will also sign for children or dependents. The form will be in duplicate. One form will be given to the individual receiving the drug while the duplicate form will remain with the CHD. When one person is receiving the drug for a group, as in a family, he or she must provide the names and addresses for all persons in the group.

h. Directions For Use.

(1) Each individual evacuated from the risk area will receive one dose of KI per the FDA guidance as listed in Table 1. Although available, additional doses of KI should not be necessary for those members of the public that have been evacuated from the risk area affected by the radioiodine plume. The prevention of thyroid uptake of ingested radioiodines will be accomplished by food control measures and not by repeated administration of KI.

(2) Short-term administration of KI at thyroid-blocking doses is safe and, in general, more so in children than adults.

(3) Persons aware that they are allergic to iodide should not take KI. Persons taking medication for thyroid conditions may take KI; however, individuals with multi-nodular goiter, Graves' disease, and autoimmune thyroiditis should be treated with caution, especially if dosing extends beyond a few days.

(4) Adults over 40 need to take KI only in the case of a projected large internal radiation dose to the thyroid (>500 cGy) to prevent hypothyroidism.

(5) Pregnant women should be given KI for their protection and for that of the fetus as iodine (whether stable or radioactive) readily crosses the placenta. However, because of the risk

of blocking fetal thyroid function with excess stable iodine, re-dosing with KI of pregnant women should be avoided.

(6) Lactating females should be administered KI for their protection, but not as a means to deliver KI to infants who should get their KI directly. Stable iodine as a component of breast milk may also pose a risk of hypothyroidism in nursing babies.

(7) Because even transient hypothyroidism can affect intellectual development, it is recommended that babies (within the first month of life) treated with KI be monitored for this effect by measurement of TSH (and FT4, if indicated) and that thyroid hormone therapy be instituted in cases in which hypothyroidism develops.

i. Possible Side Effects. Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea). A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, swelling of parts of the face and body, and at times severe shortness of breath requiring immediate medical attention. Taking iodide may, on rare occasions, cause over-activity, under-activity, or enlargement of the thyroid gland (goiter).

j. Reference. FDA procedural guidance document, Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, December 2001.

k. Authorization for Distribution of KI. The dispensing of KI to the public is approved only by the State Health Officer or their designee.

Annex G (Radiological Exposure Control)
Appendix 5 (Potassium Iodide (KI) Policy)
Tab A (Emergency Worker KI Storage and Distribution Locations)

1. STORAGE.

a. KI will be stored at the following locations.

Storage Location	Quantity
MSDH/DRH Office, Jackson	244 boxes
Claiborne County Health Dept., Port Gibson	300 boxes
Port Gibson/Claiborne County EOC	300 boxes
MDOT Testing Lab, Jackson	4 boxes
MDOT Port Gibson Maint. HQs	2 boxes
MDOT Hazlehurst Maint. HQs	2 boxes
MDOT Vicksburg Maint. HQs.	2 boxes
Natchez Trace Parkway	4 boxes
MHP Jackson District HQs	50 boxes
MHP Brookhaven District HQs	41 boxes

b. The storage life of KI is approximately five years. Upon expiration, the MSDH resupplies KI storage locations. The expired KI is collected and transferred to MSDH for proper disposal methods.

2. DISTRIBUTION. KI will be issued to emergency workers from the following locations:

Distribution Locations	Quantity
MEMA SEOC, Jackson	100 boxes*
MSDH/DRH, Jackson	100 boxes
Port Gibson/Claiborne County EOC	300 boxes
Claiborne County Health Dept., Port Gibson	300 boxes

* At SAE, 100 boxes will be transferred from MSDH/DRH Office to the SEOC.

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Annex G (Radiological Exposure Control)
Appendix 5 (Potassium Iodide (KI) Policy)
Tab B (Iodine Sensitivity Questionnaire (Rep-3))

IODINE SENSITIVITY QUESTIONNAIRE (REP-3)

Full Name _____

Social Security Number _____ E-mail Address _____

Name of Agency/Bureau/Branch _____

Phone Number (Office) _____ (Home) _____

UPDATE ANNUALLY

If you are called upon to assist in an emergency at a nuclear power station, as an emergency worker, it is possible you may be advised to take Potassium Iodide (KI) tablets. Taking potassium iodide is a **voluntary** recommendation by health officials. The thyroid gland is especially sensitive to radioactive iodine, a fission by-product that could be released in the event of an accident at a nuclear power station. Potassium iodide reduces the uptake of radioactive iodine by the thyroid, but provides no protection from any other radionuclide. Please answer the following questions so that a record can be generated of whether or not you are sensitive to iodine. If your answers to these questions indicate possible iodine sensitivity, you should only take potassium iodide under medical supervision.

Answer YES or NO to the following questions:

1. Has any physician told you that you have sensitivity to iodine? _____
2. You know you are allergic to iodine (If you are unsure about this, consult your doctor. A seafood or shellfish allergy does not necessarily mean that you are allergic to iodine.) _____.
3. You have certain skin disorders (such as dermatitis herpetiformis or urticaria vasculitis)._____.

I have been provided with the information concerning potassium iodide. I understand the benefits and risks associated with this drug. Please check one:

☐ I request that it be given to me. ☐ I request that it not be given to me.

Signature_____ Date _____

Home Address _____

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Annex G (Radiological Exposure Control)
Appendix 5 (Potassium Iodide (KI) Policy)
Tab C (KI Distribution Log (REP-4)

POTASSIUM IODIDE (KI) DISTRIBUTION LOG REP-4

DATE TIME	NAME SOCIAL SECURITY #	AGENCY/ ORGANIZATION	SUPERVISOR	COMPLETED SURVEY Y/N	KI SENSITIVITY Y/N	PERSON DISTRIBUTING

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Annex G (Radiological Exposure Control)
Appendix 5 (Potassium Iodide (KI) Policy)
Tab D (Table 1 – Exposure vs Recommended Doses)

	Predicted Thyroid gland exposure (cGy) (1 cGy = 1 rem)	KI dose (mg)	Number or fraction of 130 mg tablets	Number or fraction of 65 mg tablets
Adults over 40 years	≥ 500	130	1	2
Adults over 18 through 40 years	≥ 10			
Pregnant or lactating women	≥ 5			
Adolescents, 12 through 18 years[a]		65	1/2	1
Children over 3 years through 12 years				
Children over 1 month through 3 years		32	Use KI oral solution[b]	1/2
Infants birth through 1 month		16	Use KI oral solution[b]	Use KI oral solution[b]

[a] Adolescents approaching adult size (≥ 150 pounds) should receive the full adult dose (130 mg).

[b] Potassium iodide oral solution is supplied in 1 ounce (30 mL) bottles with a dropper marked for 1, 0.5, and 0.25 mL dosing. Each mL contains 65 mg potassium iodide.

Source: FDA, "Guidance: Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies" (December 2001): http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM080542.pdf (FDA 2001); and FDA, Frequently Asked Questions on Potassium Iodide (KI): http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm072265.htm (Last Updated: 10/27/2014).

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Annex G (Radiological Exposure Control)
Appendix 5 (Potassium Iodide (KI) Policy)
Tab E (General Public Potassium Iodine Consent/Waiver Form (REP-5))

POTASSIUM IODIDE CONSENT/WAIVER FORM (REP 3-A)

HOW POTASSIUM IODIDE (KI) WORKS - In a radiation emergency radioactive iodine may be released into the air. Inhalation is the primary method of uptake, although ingestion may be possible. Radioactive iodine may enter the thyroid gland and damage it. When taken shortly after exposure to radioactive iodine, potassium iodide (KI) will saturate your thyroid gland with stable iodine reducing chances of thyroid damage.

DIRECTIONS FOR USE - Each individual will receive one dose of KI in accordance with FDA guidance. Although available, additional doses of KI should not be necessary for those members of the public that have been evacuated from the risk area.

POSSIBLE SIDE EFFECTS - Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea). A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, swelling of parts of the face and body, and at times severe shortness of breath requiring immediate medical attention. Taking iodide may, on rare occasions, cause over-activity, under-activity, or enlargement of the thyroid gland (goiter).

PRECAUTIONS - Persons aware that they are allergic to iodide should not take KI. Persons taking medication for thyroid conditions may take KI; however, individuals with multi-nodular goiter, Graves' disease, and autoimmune thyroiditis should be treated with caution, especially if dosing extends beyond a few days.

Adults over 40 need take KI only in the case of a projected large internal radiation dose to the thyroid (>500 cGy) to prevent hypothyroidism.

Pregnant women should be given KI for their own protection and for that of the fetus as iodine (whether stable or radioactive) readily crosses the placenta.

Lactating females should be administered KI for their own protection, but not as a means to deliver KI to infants who should get their KI directly.

I have read the information on this form about potassium iodide. I have had a chance to ask questions, and they were answered to my satisfaction. I believe I understand the benefits and risks of potassium iodide and:

- ☐ I request that KI be given to me and/or the person named below for whom I am authorized to make this request.
- ☐ I request that KI is **not** given to me and/or the person named below for whom I am authorized to make this request.

_____ **Signature of Responsible Person**

Address: _____ City: _____

County: _____ State: _____ Zipcode: _____

Name: _____ DOB: _____ Weight: _____ Dosage: _____

Name: _____ DOB: _____ Weight: _____ Dosage: _____

Name: _____ DOB: _____ Weight: _____ Dosage: _____

Name: _____ DOB: _____ Weight: _____ Dosage: _____

Name: _____ DOB: _____ Weight: _____ Dosage: _____

Note: weight only needed for adolescents over the age of 12 through 18 years.

_____ **Signature of Nurse**

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Annex G (Radiological Exposure Control)
Appendix 6 (Access/Egress Radiological Exposure Control)

1. GENERAL. To provide control of radiological exposure for:

a. State and local government radiological emergency response personnel.

b. All other emergency response personnel.

c. The affected populace.

2. OPERATIONAL CONCEPT AND PROCEDURES.

a. Concept of Operations. The responsibility for radiation exposure control rests primarily with the affected local government. State agencies will provide technical advice and guidance and assist in radiological emergency accident management at the request of the local government radiological emergency response coordinator. The conduct of radiological emergency functions not otherwise preassigned to the MSDH/DRH or the Radiological Emergency Response Team (RERT) in areas under state government jurisdiction is the responsibility of the MEMA Director. The mechanisms used to control radiation exposure are:

(1) Control of access/egress to/from areas affected by radiological emergencies.

(2) Continuous radiological monitoring of emergency services personnel remaining in areas affected by radiological emergencies.

(3) Limiting the total radiation dose emergency services personnel receive.

(4) Monitoring evacuees for radiation contamination.

(5) Decontamination of radiologically contaminated personnel.

(6) Restricting water supplies from surface sources and open wells.

(7) Restricting the use of contaminated food.

b. Operational Procedures.

(1) Access/Egress Control. Area control of access/egress will be established immediately

by law enforcement personnel upon a determination that evacuation is necessary. Evacuation Time Estimates (ETE) have been performed and are incorporated into the local plans.

(a) Access Control.

- Typically, only authorized emergency personnel with identification, properly equipped, and adequately monitored will be permitted to enter a restricted area once access control has been established. Where practicable, a buddy system of reentry will be used.

- Individuals (other than emergency workers) requiring access to an evacuated area will:

  - Be advised of stay-time in the area.

  - Be provided dosimetry before entering the area.

  - Use the buddy system (i.e., pair-up with a neighbor also requiring access) when entering the area.

  - Egress the cordoned area at the same checkpoint where access was made.

(b) Egress Control.

- Evacuees, excluding emergency personnel, upon leaving an affected area will be directed to a reception center for radiological monitoring, decontamination as necessary, and registration. The local government evacuation plans designate the location of reception centers.

- If evacuation of the plant is required, personnel will be directed to proceed to their homes and await further instructions. The movement will be along Grand Gulf Road to Highway 61. There are no suitable alternatives to this route.

(2) Radiological Emergency Worker Monitoring. Emergency workers or workers working together as a team entering a radiation-affected area are required to have at least two (2) exposure monitoring devices. At a minimum, personnel shall wear a 0 to 20 R and 0 to 200 mR self-reading dosimeters (SRDs) and a TLD. An exposure card will be maintained by each emergency worker. Emergency Worker Decontamination Stations will assure that the Personal Radiation Exposure Card (REP-1) has been filled out by all personnel entering or leaving affected areas. The MSDH/DRHs RERT Coordinator has delegated the responsibility of ensuring the exposure of emergency workers is kept as low as is reasonably achievable but not to exceed the

limits specified for the general public in Annex E. Only when authorized by the RERT Coordinator and/or the State Health Officer and/or the medical liaison officer is any emergency worker to be allowed to receive doses or be exposed to concentrations of radioactivity that could result in doses greater than those allowed for the general public. If it becomes necessary for an emergency worker to be exposed to levels exceeding those specified for emergency workers in Annex E, i.e. for lifesaving activities, the individuals' decisions will be made voluntarily.

(a) Emergency workers will read their SRDs upon each entry and exit from an affected area and/or the beginning and end of each work shift. All readings will be recorded on REP-1.

(b) If dosimeter readings indicate that exposure limits listed in Annex E (Protective Action Guides) are being approached or have been exceeded after an orderly shutdown of his activities the emergency worker will leave the affected area and report to a control point for radiological contamination monitoring. The exposure will be reported to the RERT Coordinator who will determine whether the person can reenter the affected area. Orderly shutdown includes: notifying others in the work party of high readings, (others should check their dosimetry), notifying supervisors of the high reading(s), ask for an appropriate replacement(s), and, if necessary, how to shut down response activities with minimal impact on other operations.

(c) Should a dosimeter go **off the scale,** the RERT Coordinator will prohibit reentry by the affected person until an accurate determination of the magnitude of the exposure can be made.

(3) Monitoring Evacuees.

(a) Normally the first radiological monitoring of evacuees will be conducted at predesignated reception centers. Each local plan describes the specific location of the reception center and the shelter facilities. A local radiological exposure control team shall be responsible for the monitoring of evacuees at the reception centers. The team shall consist of a radiological monitor and a registrar, who shall document all radiological monitoring activities at the Reception Center. Personnel monitoring will be accomplished with the procedure outlined in Appendix 3. Decontamination shall be performed if the radiological contamination levels exceed two (2) times that of local background. Assistance in decontamination is to be rendered by local medical personnel and county health department personnel.

(b) For situations where evacuees have to be transported to a medical care facility, the facility is responsible for contamination monitoring and decontamination procedures as well as providing medical care.

3. LOGISTICS.

a. Emergency workers or workers working together as a team entering an affected area will have available MEMA-REP Equipment. Supplementary SRDs and TLDs will be made available as needed. The instrument kits/boxes and dosimeters are supplied to the various state agencies named in this plan. Maintenance, calibration, and periodic servicing of the instruments are provided by MEMA. The MSDH/DRH will provide for the maintenance, annual calibration, and periodic servicing of the necessary instrumentation for the RERTs.

b. SRDs and TLDs are required for emergency workers or teams who need to enter a radiologically affected area. SRDs and TLDs are supplied to state and local emergency workers by MEMA. The RERTs, in addition to SRDs and TLDs, are supplied with additional dosimetry by MSDH/DRH.

c. Certain specialized equipment is available to RERTs. Among the equipment are portable dual-channel communications devices, portable air sampling devices, and protective clothing. Other emergency workers are supplied with specialized equipment by their respective agencies and/or organizations. This equipment is housed and maintained by MSDH/DRH.

d. All laboratory and specialized portable equipment relating to radiation monitoring and measurement will be supplied through the MSDH/DRH.

e. Transportation of emergency workers to the affected area(s) will be by personal vehicle, agency pool vehicles, or state law enforcement vehicles.

4. TRAINING.

a. Initial and update training of radiological monitors in use and maintenance of radiation detection equipment will be conducted by MEMA. Training of the RERTs will be conducted by MSDH/DRH.

b. Training of emergency workers from local jurisdictions will be conducted by MEMA. MSDH/DRH will assist MEMA as necessary.

c. Training in radiological monitoring techniques, radiation accident management, and the use of specialized equipment will be the responsibility of MEMA.

Annex G (Radiological Exposure Control)
Appendix 7 (Location of MEMA REP Instrumentation)

Local/State Organization	Ludlum Model 26	Ludlum Model 25	Ludlum 14-C	SRD-138	SRD-730	Portal Monitor
Claiborne County EMA*	4	4	6	20	20	1
Warren County EMA	4	4	4	20	20	1
Copiah County EMA	4	4	5	20	20	1
Hinds County EMA	4	4	4	20	20	1
Adams County CD	4	4	4	20	20	1
Vicksburg FD	0	0	6	20	20	0
MHP	0	0	0	20	20	0
MDOT	4	4	0	20	20	0
MEMA Stock	20	41	38	140	140	0

*Claiborne County houses radiological emergency detection equipment for American Medical Response ambulance service.

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Annex G (Radiological Exposure Control)
Appendix 8 (Thermo Luminescent Dosimeter (TLD) Procedures

1. INSTRUCTIONS FOR TLD USE.

a. During incident response, a TLD must be carried on your person at all times.

b. Clip the TLD to your shirt or place in the shirt pocket during incident response. Do not put in pants pocket or wallet.

c. Keep the TLD away from Dental or other X-ray generating equipment.

d. Keep the TLD dry.

e. Upon completion of the incident response, return the TLD to the official who issued it to you.

f. A TLD is not to be used by more than one person.

g. For further information call MISSISSIPPI EMERGENCY MANAGEMENT AGENCY at 1-800-222-6362 or MISSISSIPPI DIVISION OF RADIOLOGICAL HEALTH at (601) 987-6893.

2. INSTRUCTIONS FOR STORING AND ISSUING TLDs.

a. **Store** TLD's in a dry area away from extreme heat or cold.

b. **Always** keep a CONTROL TLD with stored TLDs. **DO NOT** ISSUE CONTROL TLD.

c. When issuing a TLD, fill out a TLD Control Log (Form REP-10).

d. **DO NOT** store TLD's near any radiological source (such as calibration or check sources for radiological instruments).

e. When a TLD is returned, call MISSISSIPPI EMERGENCY MANAGEMENT AGENCY at (601) 933-6362 or MISSISSIPPI DIVISION OF RADIOLOGICAL HEALTH at (601) 987-6893 for follow-up instructions.

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Annex G (Radiological Exposure Control)
Appendix 8 (Thermo Luminescent Dosimeter (TLD) Procedures)
Tab A (TLD Control Log (REP-10)

THERMOLUMINESCENT DOSIMETER (TLD) CONTROL LOG **REP-10**

Date Issued: _____ Incident: _____

TLD #	Full Name (Print)	Social Security #	Agency/Organization	Date Returned

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Annex G (Radiological Exposure Control)
Appendix 8 (Thermo Luminescent Dosimeter (TLD) Procedures)
Tab B (TLD Storage and Distribution Locations)

There are 635 TLDs distributed by MEMA and available for immediate use. All TLDs are exchanged annually to assure quality control.

STATE/LOCAL ORGANIZATION	**TLD's ISSUED**
Vicksburg/Warren Co. Civil Defense	50
Copiah Co. Civil Defense/Emergency Management Agency	50
Natchez/Adams Co. Civil Defense	50
Hinds Co. Dept. Of Emergency Management	50
Claiborne County Civil Defense (for Emergystat Ambulance Service)	34
Claiborne Co. Emergency Worker Decon Stations	21
Natchez Trace Parkway	10
MS Highway Patrol	130
MS Department of Transportation	50
MS State Dept. Of Health/Div. Rad. Health.	20
MS Emergency Management Agency - Operations	52
Port Gibson/Claiborne Co. Civil Defense	20
MS Emergency Management Agency – Stock	63
Vicksburg Fire Department (Airport - Backup Decon Station)	35

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Annex H (Recovery, Reentry, and Relocation)

1. PURPOSE. To prescribe those procedures and criteria for state and local governments to use during a radiological accident at GGNS or RBS and to define those guidelines to be used during reentry of an affected area after a radiological accident.

2. CONCEPT OF OPERATIONS.

a. General.

(1) An accident for which this annex is designed is those with offsite consequences. Responsibility for onsite recovery operations are not intended to be addressed.

(2) MSDH/DRH will continue to be the lead agency during the recovery phases of operations. MEMA will continue to coordinate the support required of other state and federal response organizations.

(3) The state agencies with primary roles in this annex are as follows (but are not limited to):

- MS State Department of Health
- Division of Radiological Health
- MS Emergency Management Agency
- MS Department of Agriculture and Commerce
- MS Board of Animal Health
- MS Department of Wildlife, Fisheries, and Parks
- MS State University/Extension Service
- MS State Department of Human Services
- MS Department of Public Safety/Highway Patrol
- MS Department of Transportation

- MS Department of Environmental Quality
- MS National Guard

(4) Reentry badges and wristbands for persons having to temporarily return to evacuated areas will be issued Annex H, Appendix 2.

(5) Once a radiological incident at GGNS or RBS is terminated with the facility in a stable condition and no further offsite releases occurring or expected, it is the responsibility of the facility operator to notify the state and local government emergency response organizations of the termination. The notification of incident termination is transmitted to the MEMA Director, MSDH/DRH Director, and RERTC, in accordance with procedures. The RAAO will verify that the incident has reached termination and recommend the initiation of recovery operations to the MEMA Director, who will notify each of the state and federal agencies and local governments responding to the incident. Additionally, the JIC will be notified of the status and the implementation of recovery operations. Reentry will be based on radiation levels according to EPA-400/R-17/001 guidelines. **Should levels exceed 2 Rem/yr projected dose, reentry permanently may not be allowed, and relocation operations will be implemented.**

b. Recovery Operations.

(1) Mission. The primary mission is to save lives; protect the health and safety of the general population, response and recovery workers, and the environment; restore critical infrastructure capacity; re-establish an economic and social base; and support community efforts to overcome the physical, psychological, and environmental impacts of a radiological incident.

(2) The End State. Achieving the desired end state of response and recovery operations to an FNF incident occurs when:

(a) All necessary lifesaving and life-sustaining assistance have been provided.

(b) Federal, state, and local governments can meet the needs of citizens.

(c) Coordination among federal, state, local, territorial, and tribal law enforcement has been achieved and maintained until the nuclear/radiological threat is resolved.

(d) Environmental impacts are minimized.

(e) Infrastructure capacity has been restored.

(f) Public safety and health protection messaging has been conducted.

(g) Response and recovery worker safety and health protection assurances have been made.

(h) Measures are in place to enable and restore commercial activity to meet the demand of the population.

(i) Contaminated waste is effectively managed, transported, contained, and/or disposed of.

(j) Processes are in place to support potentially multi-year fatality management efforts.

(k) Displaced populations have returned or relocated to permanent housing.

(l) Long-term public health monitoring and behavioral health programs are in place.

(m) Successful recovery, as defined by the impacted communities and states, is achieved.

(n) Nationally, healthcare systems are fully engaged, and systems are in place to ensure adequate care for all casualties and other evacuees.

(3) Responsibilities.

(a) The MSDH/DRH will initiate recovery operations surveys by the RERTs, supported by state and federal agencies with an assigned responsibility. The RERTs, in coordination with the MDAC and the DEQ, will initiate surveys and environmental sampling of the affected areas using survey and sampling techniques prescribed by the RERT manual (see separate cover). The results of these surveys will be forwarded to the RAAO for assessment and evaluation. Based on the assessments and evaluation, MEMA will be advised of recommended courses of action and, after consultation with the Governor's Office, will initiate public advisories through the JIC. MEMA continues to be responsible for the implementation of the required recommendations at the state level.

(b) The RAAO will evaluate total population and emergency worker exposure during the incident and recovery operations using the methodology described in EPA-400/R-17/001 and integrating the projected dose throughout the incident.

(c) MEMA will be prepared to coordinate or request any assistance that the local

government may need to return to normal activities.

(4) Coordination of Benefits. Financial assistance following a nuclear or radiological incident poses a risk for duplicate services and financial support. A coordinated system to deconflict survivor assistance will be required. Emergency Support Function #6, US Department of Health and Human Services, MS Department of Human Services, MEMA Chief Recovery Officer (Public Assistance and Individual Assistance), MS Small Business Administration, FEMA, U.S. Department of Housing and Urban Development, American Nuclear Insurers, and others may establish a benefits workgroup to avoid duplicate services and financial support while ensuring streamlined assistance to survivors.

c. Reentry Operations.

(1) After the relocation area is established, people will need to reenter for a variety of reasons, including recovery activities, retrieval of property, security patrol, operation of vital services, and, in some cases, care and feeding of farm and other animals. It may be possible to quickly decontaminate access ways to vital institutions and businesses in certain areas so that they can be occupied by adults either for living (i.e., institutions such as nursing homes and hospitals) or for employment. Clearance for occupancy of such areas will require dose reduction to meet exposure limits (EPA 1987b). Dose projections should include both external exposure from deposited material and inhalation of resuspended deposited material for the duration of the planned exposure. People working in areas inside the relocation area should operate under the controlled conditions established for occupational exposure (EPA 1987b). The emergency worker dose limitation does not need to include ongoing doses received from living in a contaminated area outside the relocation area. It is also not necessary to consider the dose received previously from the plume or ground-shine during the early phase of the radiological incident. See the Reentry Matrix in Annex H, Appendix 3. It provides a quick reference for public and emergency worker dose guidelines and considerations for decontamination ongoing during this phase.

(2) Reentry operations occur as a result of an evacuation of some segment of the EPZ. This may be as little as one Protective Action Area or as much as the entire EPZ. Reentry operations can be categorized into two phases; short-term reentry and return.

(3) Short-Term Reentry may begin during the response to the emergency for emergency reasons such as the care of livestock. This activity must be carefully controlled to ensure the security of the evacuated area and the safety and health of the individuals who require reentry. Each person desiring reentry must be permitted into the area by authorized officials and should be escorted or badged for identification and dose assessment. Name, time of entry and exit, and purpose should be logged at the point of entry. All personnel who reenter the evacuated area should be directed to exit by the same route. Each individual should be briefed on the existing

radiological hazards and the possible long-term consequences and advised that they enter at their own risk. Their signature on a log at the point of entry indicates that they have received this briefing.

(4) Return may be recommended by MSDH/DRH when there is no longer a radiological threat to the area. The EPA-400/R-17/001 recommendation for the first year is <2 Rem/yr dose for long term reentry to an affected area. When reentry is recommended, the MEMA Director, with the concurrence of the Governor's Office, will make a public information announcement to this effect. State and local law enforcement agencies will assist traffic flow back into the area in the same manner that evacuation was controlled. Representatives from county gas, water, and fire departments, as well as the local electrical utility, should precede the general public into the area to ensure the availability and safety of needed utilities. Consideration must be given to the disposal of spoiled food and/or agricultural products from homes and groceries and the replenishment of supplies.

(5) Required tasks to conduct for Reentry Operations are outlined in Annex H, Appendix 2 after it is deemed safe for temporary or permanent return.

d. Relocation Operations. Relocation operations will be recommended should the RAAO determine from all monitoring and assessment data that the dose projection will exceed 2 Rem/yr in any area. This means locating housing and moving permanent residents and closing the area to entry on a long-term or permanent basis. This will require federal assistance from HUD and HHS.

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Annex H (Recovery, Reentry, and Relocation)
Appendix 1 (Draft Recovery and Reentry Plan)

1. CURRENT STATUS.

a. Plant Conditions.

(1) A release of _____ occurred as a result of an accident at_____on _____. The release was reported at approximately_____.

(2) As of _____CST, _____Mo, _____Yr., the fixed nuclear facility (FNF) reports a _____condition.

b. Dose Projections.

(1) As of _____ CST, _____Mo, _____Yr., thyroid and whole-body radiation levels were projected from the FNF.

(2) CDE(thyroid) and TED offsite radiation levels for distances of 5 and 10 miles from the FNF are projected as follows:

CDE(thyroid)	TED	Sector
5 Miles _____rem	_____rem_____	
10 Miles_____rem	_____rem_____	

c. Recommended Protective Actions.

(1) All areas have been evacuated to a distance of _____miles from the FNF.

(2) The following areas have been evacuated to a distance of _____miles from the FNF:

Area _____	Area _____
Area _____	Area _____
Area _____	Area_____

(3) Sheltering has been recommended for the following areas:

Area _____	Area _____
Area _____	Area _____

Area _____ Area _____

(4) KI has been issued to all emergency personnel within a _____mile radius of the FNF.

d. Offsite Conditions.

(1) The plume extends at this time to affect the following areas:

Sector	Distance	Sector	Distance

(2) Shelter space has been opened in _____ Counties to accommodate the approximately _____ evacuees. MDHS and ARC indicate that sheltering operations could be sustained for _____ days without requesting additional supplies.

(3) The SEOC, local EOC, EOF, and JIC are operational. Overall emergency management is being coordinated through the SEOC.

(4) Roadblocks to limit ingress and egress have been established by the MHP and MDOT at the following locations:

_____

_____

_____

(5) MS National Guard has been dispatched to assist recovery operations.

(6) MDAC has restricted transportation of agricultural and dairy products from the following area_____
_____
_____

(7) Additional monitoring assistance has been requested from Alabama, Georgia, Florida, and South Carolina. Additional laboratory assistance has been requested from EPA and DOE.

2. RECOVERY OPERATIONS. All recovery and reentry operations will be directed from the SEOC by the RAAO. The coordination and direction of other state agency personnel will also emanate from the SEOC.

a. Sheltering.

(1) Given the request by _____ county(s) to relax protective action recommendations in those areas where sheltering has been implemented, the areas listed below will be screened from a distance of 2 miles to the farthest extent of the PAA from the FNF beginning at the farthest extent and working inward.

Area _____	Area _____
Area _____	Area _____
Area _____	Area _____

(2) Random samples will be collected from water systems, soil, dairies, and milk processors, and edible food and/or agricultural products within the sectors listed below. MDAC personnel will assist in this effort. National Guard and state law enforcement vehicles are available to transport personnel and samples.

Sector _____	Sector _____
Sector _____	Sector _____
Sector _____	Sector _____

(3) In-state laboratory analysis of collected samples will be performed by the fixed MSDH/DRH Lab in Jackson. Additional laboratory support has been requested and is available from the DOE and EPA. Transportation of samples to these labs will be coordinated by the SEOC.

b. Relocation.

(1) The sectors listed below will be screened for a distance set by the RAAO from the FNF, beginning at that distance and working inward. All other areas will be screened from a distance of 0 to 2 miles beginning at 2 miles and working inward. Aerial and land survey teams comprised of state agency personnel and those additional monitors requested from local government and other states, will screen each area in detail by reviewing sections of land no larger than one-mile square. National Guard and state law enforcement helicopters and state and local law enforcement or

emergency vehicles will be used to transport personnel and samples.

Sector	Distance	Sector	Distance

(2) Random samples of water systems, soil, dairies and milk processors, and edible food and/or agricultural products within affected areas will be collected. MDAC will assist in this effort under the coordination of the MSDH/DRH. DEQ will assist in the reclamation of soil and water resources.

(3) MDWFP will assist in the collection of wildlife and fish samples within the affected areas as follows: _____

_____

(4) MHP, with assistance as needed from the National Guard, will maintain security along the affected areas which have been cleared, until protective actions have been relaxed and reentry allowed.

(5) Any contaminated areas identified as exceeding relocation PAGs by survey teams will be marked off and secured by local and state law enforcement personnel.

(6) Transportation of samples to available laboratories for analysis will be coordinated through the SEOC.

(7) The EOF and SEOC will maintain maps identifying sectors and areas that need priority screening as well as those areas that have been screened. The SEOC will also ensure that all identified areas have been screened and that exposure records are maintained for all emergency personnel involved in screening and/or sample collecting activities.

3. REENTRY OPERATIONS.

a. Actions.

(1) Upon determination by survey/monitoring teams that an area is safe, the MSDH/DRH

will make recommendations to the Governor's Authorized Representative to relax the protective action recommendations for that area.

(2) Permanent reentry will be considered only after doses of less than two (2) Rem in the first year and 0.5 Rem in any subsequent year have been verified.

(3) No reentry will be authorized without the concurrence of the Governor's Authorized Representative. Cleared areas will be opened only when definable boundaries are available.

(4) MDAC will restrict the transportation of agricultural products from the following areas until the Governor's Authorized Representative concurs that the area and products are safe:____

_____

_____

(5) The dosimeters and exposure records of those emergency workers within relaxed areas will be collected and transported to the RECO. Exposure records will be maintained for each emergency worker.

(6) As areas are opened for reentry, roadblocks and other means for restricting access to the area will be relocated to prohibit reentry beyond that area. As an area is relaxed, normal crime prevention policies and procedures will be returned after the return of the general population. MDHS and ARC will coordinate supporting these personal needs and provide any additional support.

(7) Evacuees from hospitals, nursing homes, and other special needs facilities will be allowed to return near the conclusion of the reentry process.

(8) Required tasks to conduct for Reentry Operations are outlined in the Procedures for Reentry into Suspected or Actual Radiological Restricted Area after it is Deemed Safe for Temporary or Permanent Return.

4. TIME FRAME. After the initial phase of the emergency, the MSDH/DRH will recommend to the Governor's Authorized Representative a time when the focus of operations should be on radiological assessment for re-entry and recovery.

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)

1. CONCEPT OF OPERATIONS.

a. Once it is determined by the Mississippi State Department of Health/Division of Radiological Health (MSDH/DRH) and Grand Gulf Nuclear Station (GGNS) that the situation has afforded the opportunity to relax the protective action recommendations (PAR), these PAR will be presented to and approved by the Executive Director of MEMA, the Governor's Authorized Representative (GAR), reentry procedures will be executed based on timeline allowances, permanent reentry or temporary reentry into the restricted area(s) that only allows for limited entry for limited household members to retrieve and secure items required for long-term displacement from their homes.

(1) Permanent reentry will be considered only after doses of less than 2 Rem in the first year and 0.5 rem in any subsequent year have been verified.

(2) No reentry will be authorized without the concurrence of the Governor's Authorized Representative. Cleared areas will be opened only when definable boundaries are available.

(3) No reentry will be authorized unless community infrastructure is in place and operational (law enforcement, fire, public utilities, etc.).

(4) Mississippi Department of Agriculture and Commerce (MDAC) will restrict the transportation and usage of agricultural and livestock products from the restricted areas until the GAR concurs with MSDH/DRH that the area and products are safe.

(5) Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) will restrict all hunting, fishing, and park activities from the restricted areas until the GAR concurs with MSDH/DRH that the areas are safe.

(6) United States Coast Guard (USCG) will restrict all river traffic in the Mississippi River per any plume pathway interference with the river.

(7) Mississippi National Guard (MSNG) will provide personnel and equipment for multiple tasks.

(a) Personnel with PPE for downrange security missions.

(b) Personnel with PPE and personnel carriers or buses for transportation of entrants from the Access Control Point (ACP) to predesignated drop off points in the relaxed conditions of the restricted area. Entrants will be retrieved at specific timeframes for return to the ACP and proper monitoring and decontamination (if required).

(c) Personnel with PPE to conduct and Operations Cell at the RCP to assist in the accountability and monitoring of restricted area conditions for all downrange personnel/entrants.

(8) As areas are opened for reentry, roadblocks and other means for restricting access to the still restricted zones will be relocated to prohibit entry beyond the authorized reentry area. As an area is relaxed normal crime prevention policies and procedures will be returned before the return of the general population.

(9) As a general rule, evacuees from hospitals, nursing homes, and other special needs facilities will be returned after the return of the general population.

b. MEMA Executive Director (the GAR) will be the primary lead on this requirement and only can be delegated if the EM Director Delegation of Authority (DOA) form (ANNEX H, Appendix 2, Tab C) is completed and forwarded to the MEMA Office of Preparedness (radiological@mema.ms.gov) and MEMA Operations Watch Desk (watchdesk@mema.ms.gov). This role which will be designated as the Radiological Reentry Lead (RRL) is responsible for:

(1) Approving all reentry requests for the occupants that reside within the boundaries of the area cleared for permanent or time-limited (temporary) reentry. Credentialing the entrants into the restricted zones based on approved procedures and locations.

(2) Ensuring that the methods, limits, controls, and techniques contained within this plan are met, not jeopardizing the evacuees reentering into their residences or businesses.

(3) Provide direction and control while considering ALARA principles focusing on life safety, incident stabilization, and protection of critical infrastructure and the environment.

(4) Identifying a position(s), location, and scheduling within the Reentry Control Point (RCP) that can coordinate the activities in establishing and operating to receive and approve reentry requests, as well as provide training and equipment to those entrants allowed access to the restricted zones.

(5) Establish and oversee the RCP for reentry operations.
Note: The location of RCP will be determined by the radiological release footprint, available

resources, ease/access into the restricted zones, and changing conditions. Care will be taken to assess all conditions that may warrant the movement or establishment of additional Reentry Control Points throughout the event to meet the demands of reentry operations. Reentry Control Points will be able to accommodate enough parking for numerous entrants, Emergency Workers, and contract style buses to receive briefings and storage of PPE items and monitoring equipment.

(6) Communicate the reentry process to the emergency workers and affected public utilizing the PIOs located in the local EOCs and the State JIC.

(7) Issuance of required dosimetry for the area of entry.

(8) Issuance of Potassium Iodide (KI) must be approved by the State Health Officer (SHO) with instructions on the administration of the KI.

(9) Provide route of travel information, access point location, decontamination instructions, and safety briefing to the entrant.

(10) Provide escort personnel contact information and meeting locations if required.

(11) Only one household occupant allowed for temporary reentry to prevent potential unnecessary radiological exposure. The movement of additional household personnel must be approved by the RRL.

(12) Issue personal protective equipment (PPE) to entrant if required with just-in-time (JIT) training.

(13) Provide radiological briefing before departure of the reception center using the briefing checklist.

(14) Ensure that the entrant has a communication device on hand (e.g. cellphone).

(15) Track stay times while individuals are inside the restricted areas. Communicate with individuals while in the area for exposure monitoring.

(16) MEMA Logistics will obtain contract buses (alternate will be school buses) to be positioned at each evacuee shelter for transport to the Reentry Control Point. Additional buses will be obtained for transportation from the Reentry Control Point to the appropriate Access Control Point into the Restricted Area.

(17) MSNG will be requested for multiple military means of transport into the Restricted Area for evacuees from the Access Point to the pre-designated stops for evacuees. MSNG will be requested for licensed drivers and assistant drivers for these evacuee transport vehicles and monitoring Stay Times for each driver/assistant entrant. Drivers and Driver Assistants into the Restricted Area will be treated as Emergency Workers and outfitted with appropriate PPE as well as individual and area monitoring equipment. Drivers and Driver Assistants into the Restricted Area will receive all appropriate Radiological briefings and training on PPE and equipment. Routes of travel will be broken into at a minimum of three separate means of transport for each Area as designated further into these procedures (Area 1, 2, or 3).

(18) The Reentry Tracking Form (ANNEX H, Appendix 2, Tab E) will be copied and distributed to the Evacuee Transport Vehicle (contract bus and military transport) for accountability.

(19) Establish Reentry Control Point operating timeframes that will be distributed to MEMA Operations and the State JIC for the widest dissemination. Before the announcement, timelines will be pre-coordinated with County Officials to ensure the Restricted Areas can accommodate the operating timeframes. Entrants will be required

(20) Establish the facilities for reentry operations using ANNEX H, Appendix 2, Tab H, and Tab I.

(21) Utilize the listing of priorities for reentry activities, ANNEX H, Appendix 2, Tab F when processing the approved entrants into the restricted areas.

(22) Utilize the "Reentry Tracking Form", ANNEX H, Appendix 2, Tab E to track entrants into the restricted areas. Be sure to give this form to the escort for each bus for accountability.

(23) Utilize the badging system to create entry wristbands for residents and business owners upon entrance into the RCP. Utilize the badging system to create temporary badges for emergency responders, utility workers, and governmental personnel upon entrance into the RCP. Both types must be worn at all times

(24) Establish guidelines for types of items that entrants may return with, domesticated pets allowances, and what will be the outcome of these items if returning from the Restricted Area with them.

2. PRECAUTIONS AND LIMITATIONS.

a. All persons reentering an evacuated or restricted zone are considered emergency workers and are to be treated as emergency workers for exposure control and personal protection concerns.

b. All entrants will report to the Emergency Workers Decontamination Station (EWDS) for personnel monitoring and decontamination before departure from the RCP.

c. All approved entrants after completion of monitoring and decontamination at the Emergency Worker Decontamination (EWD) station, will be transported by contract bus, or similar) to the Reentry Control Site for processing.

d. Reentry activity unfortunately requires a continuous evaluation of the existing radiological emergency through the analysis of radiological monitoring reports, air samples, weather forecasting, and samples or foodstuffs, foliage, and water collected within the EPZ and/or other affected areas.

e. Each reentry request will be considered on a case-by-case basis, with greater flexibility allowed to those carrying radiological monitoring equipment and performing high priority tasks. This initiated standard will be updated more precisely as field sampling continues and the extent and level of contamination are better understood.

f. Reentry activities require an enormous amount of resources (personnel and equipment) to execute and sustain. Mutual aid from other counties in the state should be called upon to assist if necessary.

3. DECISION MAKING AND APPROVAL PROCESS FOR REENTRY.

a. Once the radiological release has been terminated and the radiation levels are within acceptable ranges as determined by the MSDH/DRH, GGNS, the EPA, and other federal assets, the MEMA REP Director will recommend to the MEMA Executive Director (the GAR) that reentry activities may be accomplished for the designated priority list of agencies and individual homeowners.

Note: Determination of reentry into high exposure and/or high contamination areas must be balanced with the need for the mission to be carried out versus the risk to the individuals. For example, it may be unacceptable to regain the power to an area if the area has been determined to be uninhabitable due to potential exposure to the general population.

b. The final decision to allow reentry to any evacuated or restricted area will be done by the GAR with coordination with the County Officials of the area affected only after:

(1) It has been deemed habitable for a temporary or permanent reentry by the MSDH/DRH, GGNS, EPA, and communicated by MEMA of the decision to allow reentry.

(2) The county has enough power restored to the area in which reentry has been permitted to include home and business owner properties and traffic control infrastructure.

(3) The county has adequate law enforcement resources (city, county, or state) in place to provide for emergency needs and crime/looting prevention.

c. MEMA will notify MHP/ESF13 upon approval of reentry.

d. ESF 13 will notify Access Point and Traffic Control Point law enforcement officers of the reentry locations and timelines.

e. Once each County Shelter is notified that reentry has been authorized and hours of operation, the County EMA will take appropriate actions to notify the shelter occupants and utilize current procedures to check-out and check-in evacuees. Transport vehicles will be organized by MEMA Logistics for the travel of evacuees. Evacuees may utilize their own POV for transport to the RCP, but this will be at their own expense. Evacuees are encouraged to utilize the provided transport issues for ease of parking at the RCP.

f. RCP identification:

(1) Homeowners will be required to present state-issued identification.

(2) Business owners will be required to present state-issued identification and business paperwork.

(3) Law Enforcement, Medical, Fire, and Governmental Officials will be authorized access with their displayed organizational badge but will be required to receive a Temporary Entry Badges at the RCP for tracking purposes.

(4) Entergy, MSDH/DRH Field Teams, and other State and Federal agencies requiring access to the Grand Gulf Nuclear Station grounds, will be required to report to the GGNS EOF for accountability. These personnel will not be required to report to the RCP. Access will be granted at the ACP with their agency/organizational identification.

(5) All badges will always remain on the person allowed access and will be readily available to show to law enforcement within the restricted area upon request.

4. ESTABLISHING THE REENTRY CONTROL PROCESS.

a. RRL located at the Reentry Control Point ensures that ANNEX H, Appendix 2, Tab C has been completed and forwarded to watchdesk@mema.ms.gov and radiological@mema.ms.gov. Reentry processing can begin only when the RRL has approved operation.

b. Process Resource Requests for 24-hour operational support (personnel and equipment).

c. Agencies/Individuals authorized for reentry based on Priority Lists and the times for entry are based on the needs (see ANNEX H, Appendix 2, Tab A, and Tab B).

d. Reliable communications are required between the RCP (RRL), Emergency Worker Decontamination Station, Access Control Points, County Shelters, Transportation Assets, and MEMA.

e. Establish operating times and curfews for reentry operations.

f. Work with the State JIC to inform the public and the media of the process. This will include:

(1) Shelter Location authorized to process entrants for reentry.

(2) Authorized agencies/individuals for reentry.

(3) The timeframe of reentry.

(4) Credentialing requirements.

(5) Emphasize if located at Evacuee Shelter to utilize the transportation provided to move to the Reentry Control Point.

(6) Address and Hours of the Reentry Control Point.

(7) Other pertinent information.

5. CREDENTIALING. Environmental Monitoring Team personnel, Entergy personnel, other Federal or State Agencies requiring access to the GGNS grounds are in clearly identified emergency response vehicles. They are being directed by the GGNS EOF with appropriate PPE, instrumentation, and dosimetry. These organizations are not required to request or carry a reentry authorization form however they will be prepared to provide mission assignment for work within

the restricted area(s). The GGNS EOF will be used as the ingress and egress point to track the accountability of each team. The following will be acceptable credentialing for approved entrants into the restricted areas:

a. Emergency vehicle agency markings.

b. State credentialing system used for large scale disaster events (Mississippi Emergency Access Program (MEAP)).

c. Emergency personnel/agency photo identification.

d. Identification placards using for display in the window (see ANNEX H, Appendix 2, Tab D) along with a state-issued driver's license or identification card.

e. Reentry form from an authorizing agency (possible federal assets).

f. A copy of the Emergency Worker Reentry Pass along with a state-issued driver's license or agency identification card.

g. Reentry badges and reentry wrist bands created at Reentry Control Point along with state issue identification/license (see ANNEX H, Appendix 2, Tab L).

(1) The badges and wristbands will be created upon check-in at the RCP.

(2) The badges will be utilized for more permanent usage during the incident by agencies to track stay times and accountability of personnel while in the restricted area.

(3) The wristbands will be utilized for temporary instances, such as homeowners, businesses, farmers, and others making entry into the permitted restricted areas on a time allowance basis.

(4) All personnel issued badges or wristbands will come through the RCP for equipment and PPE issue, training, and escort to the Access Control Point (ACP), where each will be scanned for check-in (time downrange) and check out (time out of the restricted area).

h. Paper Entry Pass system (ANNEX H, Appendix 2, Tab D) will be utilized in the event the badging and wristband systems are not operational.

Note: Entergy employees will be discouraged from using their privately-owned vehicles for relief

responsibilities to the site/near site. Entergy will designate offsite parking outside of the restricted areas to transport employees into the affected area. Entergy badging will be adequate for reentry credentialing.

6. ORDER OF ENTRY. Actual reentry is divided into two levels of priority:

a. Priority I agencies/personnel are those requiring access to restricted zones for critical activities. The radiological conditions are known or projected (use ANNEX H, Appendix 2, Tab A). Categories include:

(1) Environmental Monitoring Teams (MSDH/DRH, Utility, Federal Assets).

(2) Search and Rescue (SAR).

(3) Fire Fighting / EMS (lifesaving)

(4) Law Enforcement (Federal, State, County, Local).

(5) EPZ and IPZ County Representatives.

(6) Industrial Processes and Utilities.

(7) Federal Oversight (including NRC response teams).

(8) Public Health.

(9) Infrastructure Repair and Protections.

(10) Tending livestock and exhibition animals.

(11) Animal Rescue and Control.

(12) Others as designated by the CRL.

b. Priority II agencies/personnel are those requiring access to restricted zones for non-critical activities. The radiological conditions are known (use ANNEX H, Appendix 2, Tab B). Categories include:

(1) Relief agencies.

(2) Healthcare agencies.

(3) Special Needs.

(4) Insurance Agents (assigned to those areas).

(5) Farmers with property within the area.

(6) Business Operators.

(7) Residents (the justified reason for reentry).

(8) Others as designated by the CRL.

7. DESIGNATED CONTROLLED AREAS AND REQUIREMENTS FOR ENTRY.

Note: Requirements for entry can be waived or modified by the CRL or local emergency management based on the need for the entry and refinement of radiological information.
The evacuated or restricted area is divided into three areas for controlling access.

a. Area One. This area is the 0-2 mile radius from GGNS. This area corresponds closely with PAA 1 in all Sectors. This area has the potential for high exposure rates and contamination to individuals and response equipment. The following are requirements for entry into the area (see ANNEX H, Appendix 2, Tab F for quick guidance for entry requirements).

(1) Stay Time – 2 hours or 1000mRem administrative turn-back value.

(2) 0-20 R range dosimeter.

(3) Personal Radiation Exposure Card (REP-1). Verify readings and record dosimeter readings on the Personal Radiation Exposure Card (REP-1) every 30 minutes or at the discretion of the CRL or other designated lead.

(4) Potassium Iodide (KI) considerations have been determined based on the approval of the SHO. Must complete the Iodine Sensitivity Questionnaire (REP-3) and turn in to CRL before signing out for movement to the Restricted Area.

(5) Personal Protective Equipment (PPE) general guidance.

(6) Radiological and pre-movement briefing of area completed.

(7) All personnel making Reentry into Restricted Areas will be classified as Emergency Workers, henceforth required to be processed through the Emergency Worker Decontamination Station before departure of the Restricted Area.

(8) Upon completion of Emergency Worker Decontamination, entrants will move to the Reentry Control Site for accountability.

b. Area Two. This area corresponds to the area inside of the projected or actual plume footprint and downwind during release, from 2-10 miles (Plume Exposure Pathway) and 2-50 miles (Ingestion Pathway). This area will continue to be refined throughout the reentry phase based on the responding agency expertise and additional information. This area has the potential for moderate exposure rates and contamination to individuals and response equipment. The following are requirements for entry into that area (see ANNEX H, Appendix 2, Tab F for quick guidance for entry requirements).

(1) Stay Time – 2 hours or 1000 mRem administrative turnback value.

(2) 0-20 R range dosimeter.

(3) Personal Radiation Exposure Card (REP-1). Verify readings and record dosimeter readings on the Personal Radiation Exposure Card (REP-1) every 30 minutes or at the discretion of the CRL or other designated lead.

(4) Potassium Iodide (KI) considerations have been determined based on the approval of the SHO. Must complete the Iodine Sensitivity Questionnaire (REP-3) and turn in to CRL before signing out for movement to the Restricted Area.

(5) Personal Protective Equipment (PPE) general guidance.

(6) Radiological and pre-movement briefing of area completed.

(7) Ingress and egress Reception Centers will be the same locations for accountability.

c. Area Three. This area corresponds to the area outside of the projected or actual plume footprint and upwind during release, from 2-10 miles (Plume Exposure Pathway) and 2-50 miles (Ingestion Pathway). This area will continue to be refined throughout the reentry phase based on the responding agency expertise and additional information. This area has a high probability of

little or no exposure rates and contamination to individuals and response equipment. The following are requirements for entry into that area (see ANNEX H, Appendix 2, Tab F for quick guidance for entry requirements).

(1) Stay Time – 8 hours or 100 mRem administrative turnback value.

(2) 0-200 mRem range dosimeter.

(3) Personal Radiation Exposure Card (REP-1). Verify readings and record dosimeter readings on the Personal Radiation Exposure Card (REP-1) every 30 minutes or at the discretion of the CRL or other designated lead.

(4) Potassium Iodide (KI) considerations have been determined based on the approval of the SHO. Must complete the Iodine Sensitivity Questionnaire (REP-3) and turn in to CRL before signing out for movement to the Restricted Area.

(5) Personal Protective Equipment (PPE) general guidance.

(6) Radiological and pre-movement briefing of area completed.

(7) Ingress/egress Reception Centers will be the same locations for accountability.

8. TRANSITIONING TO RECOVERY AND RETURN PHASE OF EVENT. Once it has been determined that the reentry phase has been completed to transition will occur to the Recovery and Return phase of the event.

9. EVENT DOCUMENTATION.

a. All documentation should be maintained on the standard forms provided by the County EMA, these procedures, and the MREPP.

b. Original documentation generated at the county and local level (logs, contamination records, etc.) should be maintained at those levels until requested by the higher level EMA.

c. In the event original documentation becomes contaminated, it should either be reproduced by photograph or double-bagged.

10. MEMA REENTRY RESPONSIBILITIES.

a. The GAR will select a Reentry Lead and a Reentry Control Point (RCP) location to conduct reentry operations for those personnel not currently registered in established Reception Center Shelters. It is also for those evacuees who have reported to the established Reception Centers for monitoring and decontamination that have relocated to sites outside of the EPZ and other than established State/County Shelters. The MEMA PIO, along with all other coordinating PIOs, will establish a combined, comparable media and social media message to all avenues of communication to alert evacuees of the Reentry procedures, instructions, and location address as well as operational times of Reentry locations.

b. This responsibility is only for Federal, State, and Local response and recovery organizations that are responding from outside of the 50-mile radius of Grand Gulf Nuclear Site. It is the discretion of the GAR or their designee to permit those organizations within this range to report to MEMA for reentry permissions on a case-by-case basis.

c. MEMA SEOC will update all County EMAs and response organizations of any updates provided to PARs that affect stay time within the Restricted Areas. AtHOC messages as appropriate to immediately act in the event of a PAR change.

d. MEMA SEOC will require timely Situation Reports (SITREP) from RCP(s), reception centers, and shelters on critical information including personnel currently downrange in the Restricted Areas under reentry protocols.

e. MEMA will designate an RCP with recommendations from MSDH/DRH and GGNS that will ensure a safe distance outside of the Restricted Area that has sufficient roadway and parking access for contract bus transport to and from the Access Control Point (ACP) and ADA compliancy.

f. MEMA will provide and/or resource manning of the RCP.

g. MEMA Logistics will obtain Contract Buses to be stationed at the Evacuee Shelters for movement to and from the RCP and additional buses from the ACP to and from the RCP.

h. MEMA Executive Director (GAR) will provide delegation of authority to a Reentry Control Point Lead to set up and operate this facility.

i. MEMA External Affairs will coordinate messaging with MEMA JIC PIO personnel to ensure dissemination of Reentry Control Point procedures, requirements, hours of operation, transportation available, etc.

11. REENTRY RESPONSIBILITIES WITH ANIMALS.

a. The Mississippi Board of Animal Health (MBAH) is responsible to handle all contagious and infectious diseases of animals as in the opinion of the Board may be prevented, controlled, or eradicated, and with full power to make, promulgate, and enforce such rules and regulations as may be necessary to control, eradicate and prevent those diseases.

b. Evacuees that return from reentry with their domesticated animal, emotional support animal, or another type of service animal will not be hindered the ability to return with that animal and all actions required for their human owners such as monitoring, and decontamination will be taken. In the event the animal cannot be decontaminated or controlled due to dangerous behavior, only the MBAH will determine what is needed for the animal.

c. At no time will a Local, County, or State official encourage the reentry evacuee to bring any animal back from the Restricted Area. Encouragement to do such an act could endanger the evacuee and those responsible for the decontamination and monitoring of the animal if it is grossly contaminated.

d. If an evacuee animal remains in the Restricted Area, the evacuee should notify any Local, County, or State Official to make contact with the MBAH or responsibly agency to determine the outcome for that animal.

e. All animals determined safe for sheltering within the state and county-run facilities will follow the guidelines from the Mississippi Department of Human Service (MDHS) pertaining to co-located shelter operations.

f. See Annex F, II(K) for further guidance on the processing of pets/service animals from the restricted zone.

Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab A (Priority Access for "Type I" Activities)

PRIORITY ACCESS FOR "TYPE I" ACTIVITIES

Priority I Access: Reentry of Emergency Workers	
Note: Some agencies have more than one responsibility in Reentry activities. *Agencies and groups that participate in defining radiological disposition, restoring normal operations to the affected area, or are part of emergency response include the following (not an all-inclusive list).*	
Sampling, Monitoring, and Assessments	Law Enforcement / Securing Property
MS State Department of Health – Division of Radiological Health	FBI
	MS Office of Homeland Security
1. Environmental Field Monitoring Teams	US Department of Homeland Security
2. Courier Pick Up and Drop Off Activities (movement of samples)	MHP
	MDOT
GGNS (Utility) Environmental Monitoring	County Sherriff / Local PD
Local/State Emergency Management	MS Department of Wildlife, Fisheries, & Pks
MS National Guard	
RERT	
RAP	
REAC/TS	Fire Fighting
MS Department of Environmental Quality	Local/County Fire Fighting Agencies
MS Agricultural Commission	
Department of Marine Resources	Emergency Medical Service/Hospital Staff
	Local/County EMS
Public Health	Civilian EMS
MS State Department of Health	Local Hospital Essential Staff
MS Department of Human Services	
Infrastructure Repair and Protection	Tending Livestock/Exhibition Animals
MS/US Department of Transportation	MS Agricultural Commission
C-Spire/AT&T/Land/Cell Phone	USDA
Local Radio & Television Services	FDA
Local EMA	CDC
Local Internet Providers	MS Board of Animal Health
Entergy/Local Power Company	
Local Damage Assessment Teams	Control of Industrial Processes & Utilities
US Department of Commerce	Public Works
Federal Oversight and Assistance	Utility / GGNS
FRMAC	1. Lineman
EPA	2. Plant Employees
FEMA	3. Contract Support Employees
NRC	4. Other utility support personnel
OSHA	
DOE	
Search and Rescue (SAR)	Animal Rescue and Control
Swift Water Rescue	MS Board of Animal Health
MS Department of Homeland Security	

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab B (Priority Access for "Type II" Activities)

PRIORITY ACCESS FOR "TYPE II" ACTIVITIES

Priority II Access: Categories and Possible Responding Agencies/Personnel	
Note: Priority II re-entry category is based on the known radiological conditions. Every effort will be made to reduce the number of entrants from this category until the "Return" portion of the event is determined.	
Relief Agencies	Insurance Agents
MS Commission for Volunteer Service	Private Insurance Claim Adjusters
American Red Cross	American Nuclear Insurers
Salvation Army	
Catholic Charities	Farmers (general)
Convoy of Hope	Feeding of:
LDS Charities	1. Livestock
Mission North America	2. Poultry
Mississippi United Methodist Disaster Relief	3. Goats/Sheep
Mississippi Knights of Columbus	4. Fisheries
MS VOAD	5. Other farming animals
National VOAD	Securing of Farm Machinery for storage
Presbyterian Disaster Assistance	
World Renew	Business Operators
United Way (2-1-1 MS)	Large business > 50 employees**
Volunteer Mississippi	**securing business property
	**relocation of business property
Healthcare Agencies	**retrieving necessary items/paperwork
Hospitals	
	Residents of the Evacuated Areas
Medically Fragile / Special Needs	Feeding pets
Registered Child Care Facilities*	Retrieving necessary items
Registered Adult Care Facilities*	
Schools: Public, Charter, and Private	Other
**lists maintained with County EMA*	Deemed necessary by county officials

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab C (Emergency Management Director Delegation of Authority)

<table>
<tr><th colspan="4">Emergency Management Director Delegation of Authority</th></tr>
<tr><td>EMA ID</td><td colspan="3">_____
(enter the Agency Name)</td></tr>
<tr><td colspan="4">This is to document that _____ (printed name) from _____ (agency/position) accepts the responsibility and authority for approving or disapproving all Reentry requests that are received by this location. I have received a briefing on the below items.</td></tr>
<tr><td>Reception Center and/or Evacuee Shelter Locations</td><td>☐</td><td>State and Federal contact information for tracking changing conditions.</td><td>☐</td></tr>
<tr><td>Radiological conditions in restricted zones.</td><td>☐</td><td>Reentry status of agency/individuals that have been approved, denied, and entrants in the field currently.</td><td>☐</td></tr>
<tr><td>Approximate exposure to individuals entering each restricted EPZ/IPZ Sector</td><td>☐</td><td rowspan="2">Other Items:</td><td rowspan="2">☐</td></tr>
<tr><td>Resource availability for 24-hour operations: PD, FD, & EMS assets operating in the restricted area and able to respond to the restricted area.</td><td>☐</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">(signature of delegating authority)</td><td colspan="2">(signature of the person receiving authority)</td></tr>
</table>

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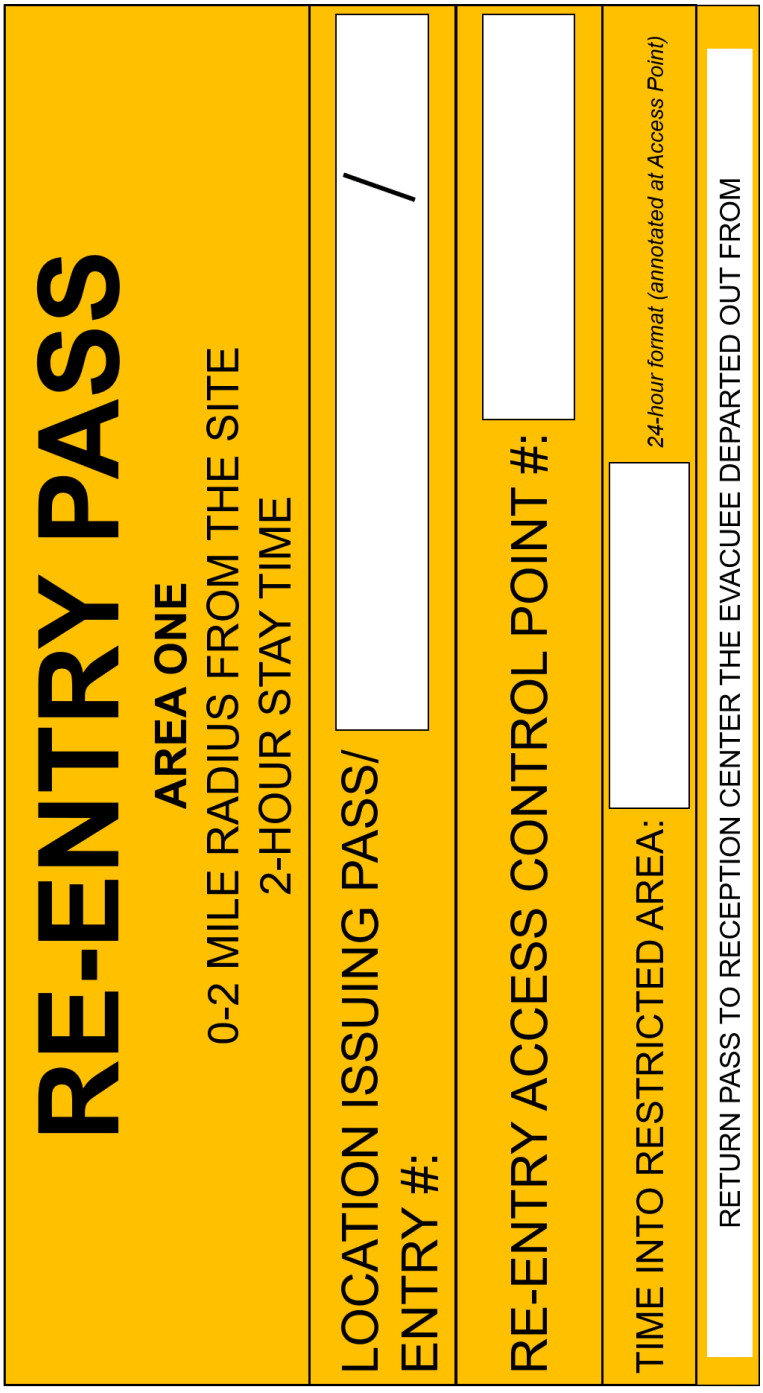
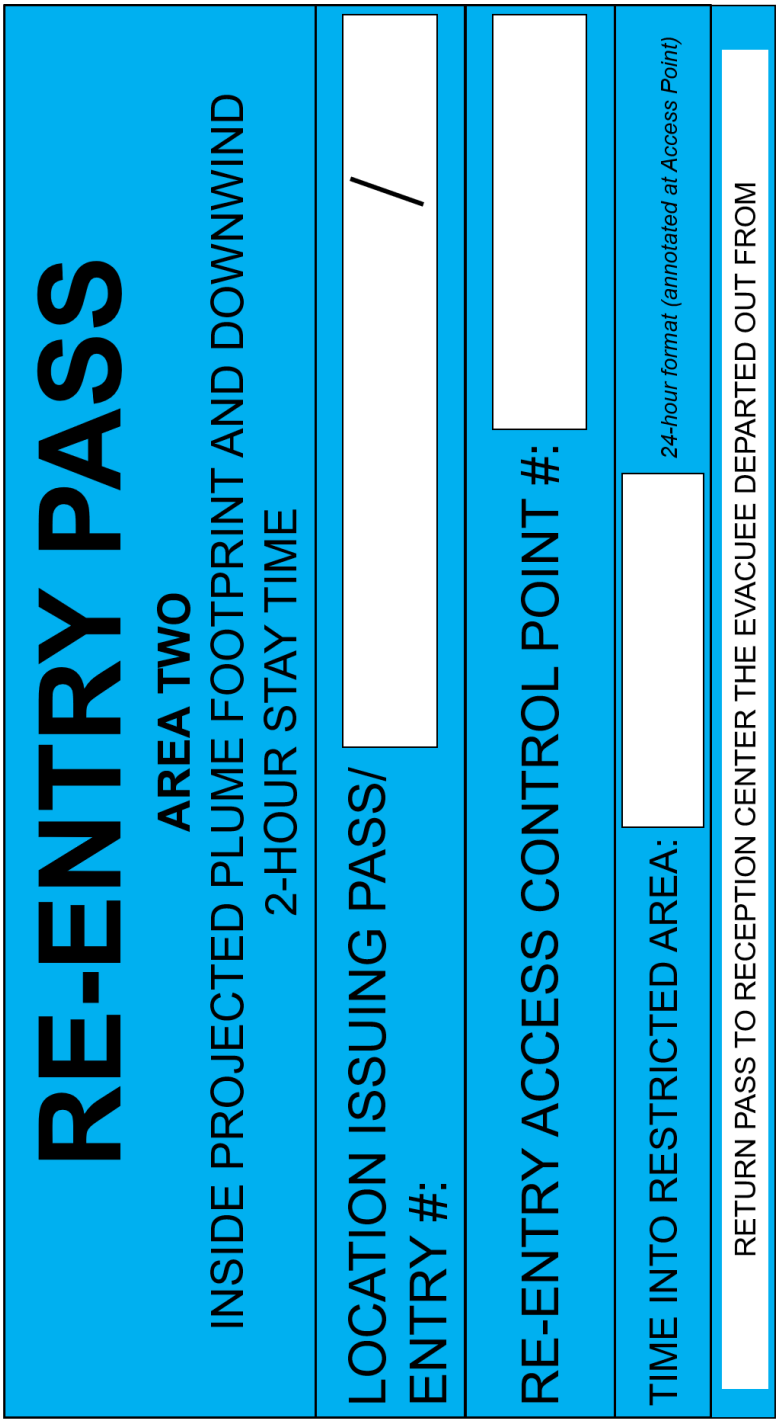
Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab D (Reentry Passes)

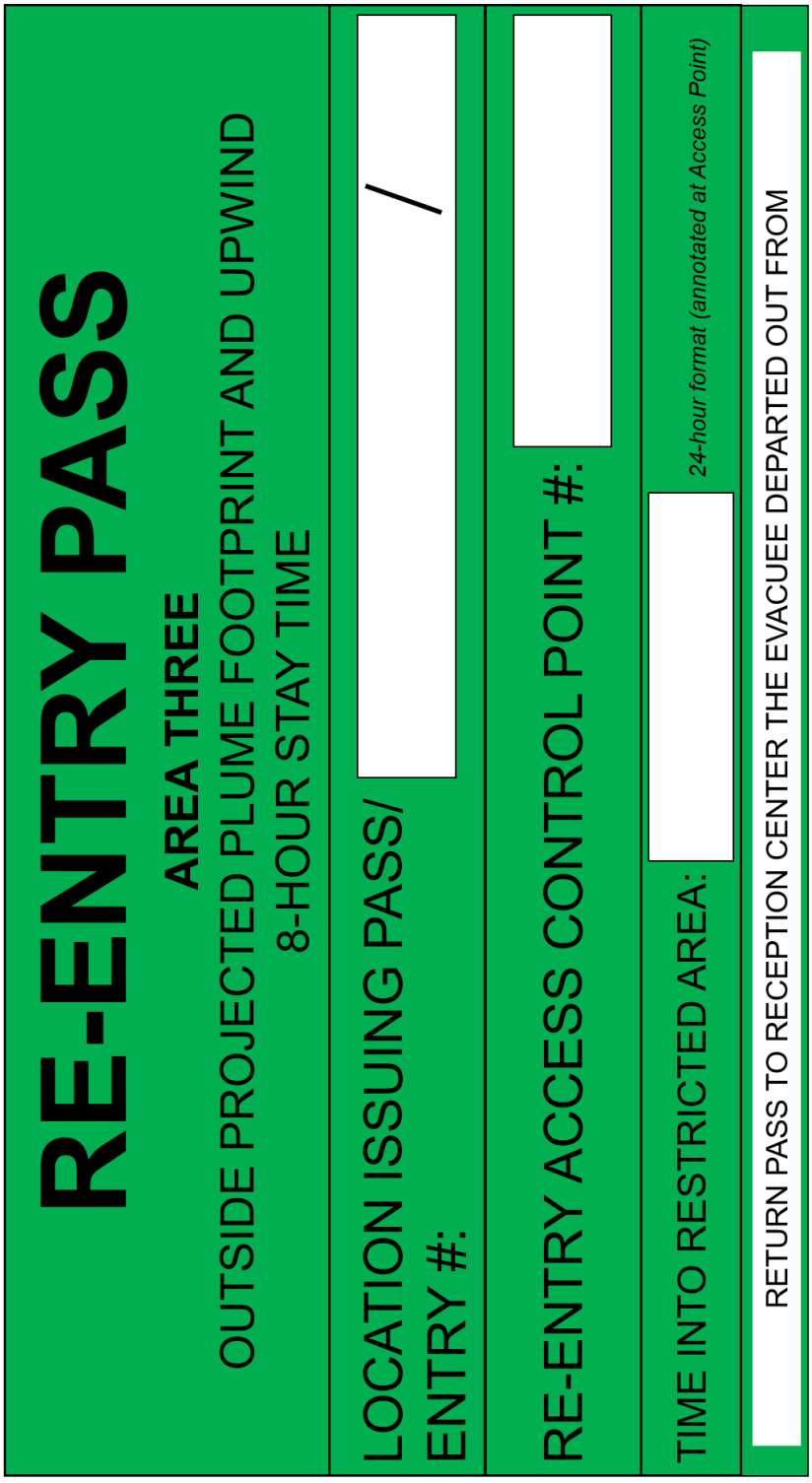
REENTRY PASS FOR AREA ONE ACCESS



REENTRY PASS FOR AREA TWO ACCESS



REENTRY PASS FOR AREA THREE ACCESS



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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab E (Reentry Tracking Form)

RE-ENTRY TRACKING FORM
ENTRIES INTO RESTRICTED AREAS (POST PLUME PHASE)

LOCATION ISSUING PASSES: _____

Entry # *(Note 1)*	Full Name *(printed)*	Residence Address Inside Restricted Area	Drivers License State/Number	Area Entered *(circle one)*	Escort Provided (required for Area 1 only) *(circle one)*	Ingress Time Into Area *(24 hour format)*	Egress Time Out of Area *(24 hour format)*	Person / Vehicle Clean *(circle one)*	Arrived at EW Monitoring and Decontamination Facility *(circle one)*	Radio Channel / Cell Phone #	Returned Re-Entry Pass *(circle one)*
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No
				1 / 2 / 3	Yes / No	hours	hours	Yes / No	Yes / No		Yes / No

Note 1: This same number is located on the Re-Entry Pass to allow for tracking information throughout the entry.

Comments

Page ____ of ____

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab F (Access Area Requirements)

Area Access Requirements for Priority I and II Re-entry Activities

Area One 0-2 Mile Radius from the Site	Area Two Inside the Projected Plume Footprint and Downwind	Outside the Projected Plume Footprint and Upwind
Stay Time and Dose Limit		
2-hour stay time or 1000mR administrative turn-back value*	2-hour stay time or 1000mR administrative turn-back value*	8-hour stay time or 100mR administrative turn-back value*
Requirements for Access to Areas for Reentry		
Dosimetry / Survey Equipment		
0-20 R direct reading dosimeter (DRD)	0-20 R direct reading dosimeter (DRD)	0-200 R direct reading dosimeter (DRD)
Permanent Record Dosimeter	Permanent Record Dosimeter	None
Personal Radiation Exposure Record Card	Personal Radiation Exposure Record Card	Personal Radiation Exposure Record Card
Survey Meter	None	None
Potassium Iodide (KI) Considerations		
KI considerations have been determined	KI considerations have been determined	None
Escort		
Law Enforcement or other designated agency (general public only)	None	None
Minimum Personal Protective Equipment (PPE) Requirements		
PPE w/ Mask	PPE w/Mask	Personal Clothing
Radiological and Zone Briefing		
Radiological Briefing Req'd	Radiological Briefing Req'd	Radiological Briefing Req'd
** Note: this guidance can be changed, based on radiological conditions or risk assessments based on the recommendations of MSDH/DRH, GGNS, MEMA, and Local EMA*		

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab G (Emergency Worker/Entrant Reentry Form)

EMERGENCY WORKER/ENTRANT REENTRY FORM

DATE _____/_____/_____

ENTRY #

(sequential # on Reentry Tracking Form)

THIS FORM MUST BE KEPT WITH YOU AT ALL TIMES UNTIL RETURN TO REENTRY CONTROL POINT (RCP)					
PART A	To be completed at the Registration Area				
Name:			Cell Phone #		
Address:					
(number/street/apt #)			*(city)*		
Priority I Entries *(check one)*				Priority II Entries *(check one)*	
☐	Radiological Sampling & Monitoring	☐	Entergy Grand Gulf Utility Workers	☐	Relief Agencies
☐	Public Health	☐	Other Industrial Processes/Utilities	☐	Healthcare Agencies
☐	Infrastructure Repair and Protection	☐	Animal Rescue & Control	☐	Access and Functional Needs
☐	Law Enforcement / Securing Property	☐	State Oversight & Assistance	☐	Insurance Agents
☐	Fire / EMS	☐	Federal Oversight & Assistance	☐	Farmers (general)
☐	Search & Rescue	☐	Other:	☐	Business Operators
☐	Tending Livestock & Exhibition Animals	YELLOW – Utilize Organization Badge ORANGE – require badge GREEN – require wristband		☐	Residents
☐	EPZ & IPZ County Representatives			☐	Other:
Signature of person re-entering Restricted Zones				(signature)	
PART B	To be completed at the Registration Area				
EPZ AND IPZ COUNTIES RESTRICTED AREAS					
Destination County in Restricted Area: _____					
Protective Action Area of Destination (if inside 10-mile EPZ): *(check one below)*					
___1___2a___2b___3a___3b___4a___4b___5a___5b___6___7___8___9___10___11___12___Other_____					
Credentials Verified *(circle or check appropriate area – fill in applicable information)*					
☐Public Credentials Verified (circle one). ☐current state-issued driver's license or identification card ☐utility bill ☐property tax or ☐ any government document which includes an address that identifies the location of their property ☐ Issued Reentry Badge					
PART C	Issue Appropriate Badge or Wristband (as necessary)				
PART D	To be completed at the Entry Information Area				
☐Area One (High Exposure/Contam. Risk)		☐Area Two (Mod. Exposure/Contam.Risk)		☐Area Three (low to no Rad Risk)	
0-2 miles Radius		Inside Projected or Actual Plume Footprint and Downwind		Outside Projected or Actual Plume Footprint and Upwind	
Informed Individual of Stay Times and Dose Limit					
2-hour stay time or 1000 mR administrative turn-back value		2-hour stay time or 1000 mR administrative turn-back value		8-hour stay time or 100 mR administrative turn-back value	
Informed Individual of Escort Requirements					
☐Law Enforcement or other designated agency				☐None	
PART E	To be completed at the Equipment Area				
Issued/Discussed Individual: Dosimetry / Personal Radiation Exposure Record Card / Radiation Survey Meter					
☐Personal Radiation Exposure Record Card				☐Permanent Record Dosimeter	
☐0-20 R DRD				☐0-200 mR DRD or equivalent	
☐Radiation Survey Meter (this can be issued at the RACP or coordinated w/ escort to provide)				☐No Radiation Survey Meter Required	
Issued/Discussed Individual: Potassium Iodide (KI) Considerations *(check applicable)* ***(+approval is required before issuing or ingesting KI)***					
☐None	☐Issue Only	☐Issue/Ingest	☐Other		

Issued/Discussed Individual: Personal Protective Equipment Requirements		
☐Tyvek Suit/Booties/Gloves with Dust Mask	☐Tyvek Suit/Booties/Gloves no Dust Mask	☐Personal Clothing

PART F	To be completed at the Briefing Area	
Informed Individual: Radiological and Protective Action Briefing		
☐Performed Radiological and Area Briefing		
☐ Discussed Entry Access Control Point (Check-In and Check-Out) / Egress through the same point when departing	☐ Before departure from the Restricted Area, everyone will proceed to the Emergency Worker Decon Station then return directly to this RCP	☐ After return to RCP, Entrant will be able to return to temporary shelter/housing
PART G	To be filled out at the RCP Registration Completion Area	Location: _____

RCP Personnel Verify Completion Below		
	Item / Step	Comments
☐	Remind or provide individual with state times and dose limits	
☐	Verify or provide the Reentry Pass/Badge as required for entry	
☐	Verify or provide individual dosimetry and survey meter as required for entry	
☐	Verify or provide KI to individual as required for entry	Must have approval
☐	Verify or provide the Personal Exposure Record Card	
☐	Verify or provide escort for individual if required for entry	Area A Only
☐	Verify or provide PPE and training to individual as required for entry	
☐	Verify or provide radiological briefing to individual as required for entry	
☐	Fill out Reentry Pass and provide to individual for display on dashboard of vehicle	Not required for emergency vehicles or badged employees for county, state, fed
☐	Area/Location/Room Entrant must wait until transportation is ready to move to the Access Control Point	
Signature of RCP Reentry representative (after verifying entrant completion of above requirements/stations)		*(signature)*
A copy of this form is given to the individual.		**Input Information on Reentry Tracking Form for Accountability**

PART H	To be filled out at the Access Control Point (ACP)	
Stay Time Tracking		
☐	Entry Time into restricted area:	_____ *(24-hour time)*
Scan Wristband or Badge for Entry Time / Exit Time or Log Entry Time onto Entry Log & Pass (if manual)		
ACP direct entrant to Transportation Location for movement into the Restricted Area		

PART I	To be filled out at the Emergency Worker Decontamination Station (EWDS)	
Stay Time Tracking		
☐	Exit Time from restricted area:	_____ *(24-hour time)*
Scan Wristband or Badge for Entry Time / Exit Time or Log Entry Time onto Entry Log & Pass (if manual)		
Collect: Dosimetry / Personal Radiation Exposure Record Card / Radiation Survey Meter		
☐Personal Radiation Exposure Record Card		☐Permanent Record Dosimeter (reading _____)
☐0-20 R DRD (reading _____)		☐0-200 mR DRD or equivalent (reading _____)
☐Radiation Survey Meter (this can be issued at the RACP or coordinated w/ escort to provide)		☐No Radiation Survey Meter Required
EWDS direct entrant to Transportation Location for movement back to RCP		

PART J	To be filled out at the RCP Final Processing Area	
EGRESS (EXIT) CHECKLIST		
	Item / Step	Comments
☐	Verify completion of form / Verify completion in Badging/Wristband System	
☐	Direct Entrant to transportation holding area for movement back to their point of return (shelter, housing) *If entrant drove to the RCP, the entrant may depart*	
☐	If Official Entry (LE, Fire, EMT, Federal, State, Local authority, etc) personnel can depart Reentry Control Point	
Notify County MEMA OPS/SEOC of the status of all entrants by 1800 and 0600 daily.		

Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab H (Reentry Access Control Point Checklist)

Establishing a Reentry Access Control Point Checklist

Step #	Item	Responsible Position or Person	Completed
1	Delegation of Authority completed for Radiological Reentry Lead (RRL) responsible for operations at the Reentry Control Point	MEMA Executive Director (GAR)	☐
2	Once determined that it is safe for Reentry, designate location outside of the Restricted Area with sufficient roadway travel access for large bus transports. The structure will have sufficient parking, areas for registration; training; storage of supplies; holding of personnel	RRL Lead, MEMA Logistics	☐
3	Obtain an ADA accessible location info related to EPZ Access Control Points and Emergency Worker Decontamination Station to determine routes of travel for all applying for Reentry access	RRL Lead	☐
4	Items suggested for each Reentry Control Point Station: - Maps of EPZ and locations of all access points - Hours of operation of access points - Passes for Reentry applicant vehicles - Badge making material along with lanyards, badge clips, and badge blanks - Sufficient training and holding areas - Reentry Pass Checklist - Reentry Tracking Form - KI (if authorized by the SHO) - ANNEX H, Appendix 2, Tab I Equipment Needs for Establishing Reentry Control Point	RRL Lead	☐
5	Identify Emergency Worker Decontamination Station location for Area One Reentry personnel	RRL Lead	☐
6	Prepare Press Release(s) with Reentry information, locations, processes	JIC, MEMA PIO	☐
7	Request the latest maps of plume exposure footprint area	RRL Lead, State DRH	☐

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab I (Equipment Needs for Reentry Control Point)

Equipment Needs for Reentry Control Point

Item #	Item	Quantity	Available
1	MREPP / Reentry Procedures	5	
2	Direct Reading Dosimetry (DRD)(0-20 R)	50	
3	Direct Reading Dosimetry (DRD) (0-200 mR)	25	
4	Permanent Record Dosimeter (PRD)	50	
5	Tablets of Potassium Iodide (KI)	100	
6	Personal Radiation Exposure Record Cards	75	
7	Radiation Survey Meters	5	
8	Tyvek Suits (Large)	50	
9	Tyvek Suits (XL)	50	
10	Tyvek Suits (XXL)	50	
11	Surgeons gloves	250 pair	
12	Calf-high shoe covers	250	
13	Masking Tape	10 rolls	
14	Face mask (disposable)	250	
15	Reentry Placards (red-Area One)	50	
16	Reentry Placards (green-Area Two)	50	
17	Reentry Placards (blue-Area Three)	75	
18	EPZ Boundaries Map	30	
19	Badge Machine	1	
20	Badge Blanks	250	
21	Lanyards	250	
22	Badge Printer Spare Ink	1 each	
23	Rope	250 feet	
24	Orange Cones	20	
25	Reentry Access Control Point Checklist	5	
26	Reentry Pass/Badge Checklist	250	
27	Access Area Requirements	10	
28	Reentry Tracking Form	25	
29	Priority Access Information	5	
30	MSWIN Radio/Charger	1	
31	Badging System w/Badge Printer	1	
32	Wristband System w/ Printers	2	
33	Badge Blanks (Badge Pass)	500	
34	Wristband Blanks (Badge Pass)	2000	
35	Additional Ink Cartridges Badges (Badge Pass)	2 each	

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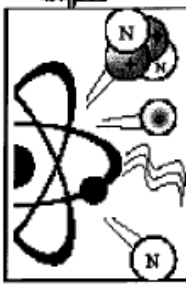
Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab J (Reentry Just-in-Time Training)

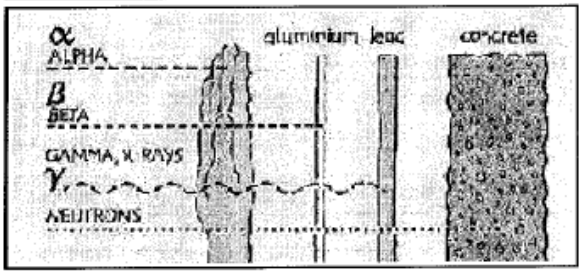
Re-Entry Just-in-Time Training
Radiological Emergency Preparedness Program



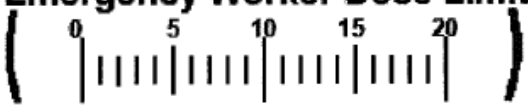
Alpha	Heavy low energy particle. Can travel only 4-7 inches in air and can be stopped by paper, clothing or skin. Ingestion or inhalation is the primary risk.
Beta	Smaller than alpha particles and can travel farther and faster. Can be stopped by several millimeters of aluminum. Prolonged exposure to the skin or lens of the eye is the primary concern.
Gamma	Gamma rays are similar to medical x-rays and can travel great distances in air. They are high-energy rays that will penetrate most materials including the body.
Neutron	High-energy particles produced by the reactor when it is in operation. Only a concern inside the plant, close to the reactor vessel.

Radiation Protection Principles

A.L.A.R.A.	**"As Low As Reasonably Achievable"**
TIME	Limit the time exposed to a source of radiation. Minimize the time spent in the 10-mile Emergency Planning Zone (EPZ) after a release. Reduce the time evacuees wait for decontamination.
DISTANCE	Dose rate decreases dramatically as you move farther from the source of radiation. Establish facilities (EOC, Command Posts, Staging Area, RM&D Centers …) outside of the EPZ.
SHIELDING	Wear protective clothing and remain behind barriers (buildings, walls, fire engine …) when possible.



Emergency Worker Dose Limits



REM (R)	LIMIT
1 R	Areas One and Two Access Limit
100 mR	Area Three Access Limit
1 R	Administrative Limit / Call-In Value
5 R	Working Limit / Turn-Back Value
10 R	* Protecting Critical Infrastructure *

Radiation Protection Terms

Action Level is 300 CPM. Any person, vehicle, or equipment surveyed to be at 300 CPM or greater is said to be contaminated and must be cleaned (decontaminated) or impounded.

Administrative Limit / Call-In Value is 1 R. If an emergency worker's pocket dosimeter reads 1 R, they must notify their supervisor, Safety Officer, Incident Commander, or EOC.

CPM (Counts Per Minute) is a measure of radiation contamination. 300 CPM is the "Action Level" in NC. CPM is measured with a radiation survey meter (Inspector EXP) and radiation portal monitors (Ludlum Model 52).

KI (Potassium Iodide) is a medication that may be distributed to emergency workers during an incident. KI prevents the thyroid gland from absorbing radioactive iodine-131. KI WILL NOT BE TAKEN UNTIL INSTRUCTED BY A SUPERVISOR. DECISION TO TAKE KI WILL BE MADE IN THE EOC. Adult dose is one 130 mg tablet every 24 hours.

"Direct Read" or "Pocket" Dosimeter measures gamma radiation (0-20 R) which can be read while in the field. Should be checked every 15-20 minutes and the results recorded on the worker's Dose Card. At the end of the operational period the dosimeter will be checked, recharged to zero, and issued to another worker.

REM (Roentgen Equivalent Man or **R)** is a unit of absorbed dose or radiation. This is measured with self-reading pocket dosimeters and permanent record dosimeters. 1 REM is your "Administrative Limit" or "Call-in Value" and 5 REM is your "Working Limit" or "Turn Back Value." 1 **Millirem (mR)** equals 1 / 1,000 R.

PRD (Permanent Record Dosimeter) is a device that measures radiation exposure but cannot be read in the field. The PRD will remain with the emergency worker through the entire event, after which it will be returned to the EOC and then read in a lab. It is the permanent record of the dose received. The PRD number will be noted at the top of the worker's Dose Card. Old term was "TLD".

Working Limit / Turn-Back Value is 5 R. If an emergency worker's pocket dosimeter reads 5 R, they must notify their supervisor to be relieved and reassigned outside the EPZ.

Quick Start Guide: Radiation

Radiation Principles

Radiation is energy emitted from unstable atoms. Atoms are the building blocks of all matter. Unstable atoms try to become stable by giving off energy. This energy is radiation. Radiation is emitted from the air, our food and water, and from the earth itself.

In a nuclear power plant, atoms in the uranium fuel split into fragments. These fragments are not stable. Unstable atoms lose their excess energy by emitting three types of radiation: alpha and beta particles, and gamma rays.

- Alpha particles are the least penetrating and can be stopped by sheets of paper.
- Beta particles are more penetrating and can be stopped with a few layers of plastic or by the outside layers of skin.
- Gamma rays have a high penetrating power but can be slowed by dense shielding material such as lead or concrete.

Radiation and Us

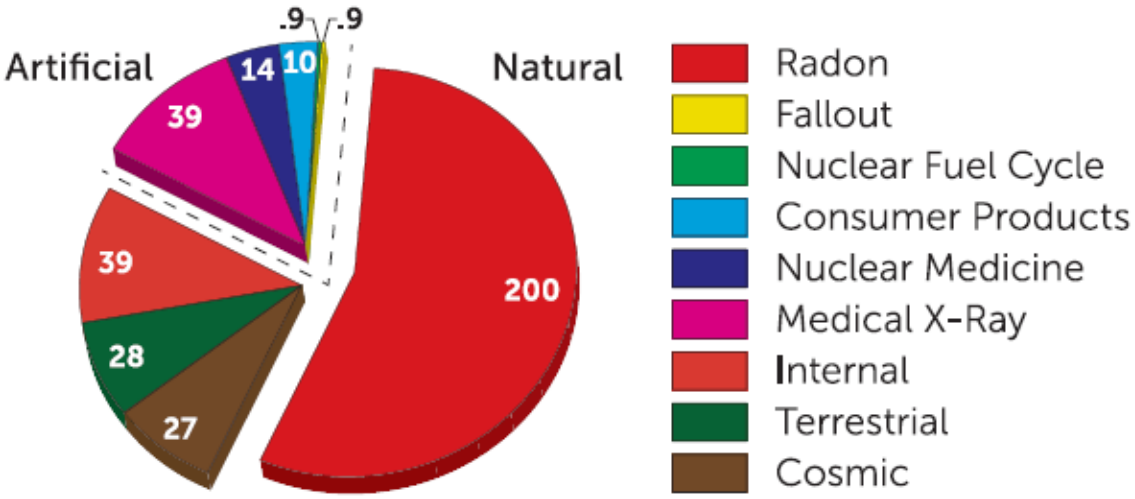
We are exposed to radiation in our every day lives. Exposure to radiation can damage cells in the human body. It is possible for cells to repair themselves depending on the amount of radiation exposure and the physical condition of the person exposed.

We measure the biological effects of radiation on the body using the measurements of “Rem” or “milliRem” (a milliRem or mRem equals one one-thousandth of a Rem).

Quick Start Guide: Radiation

The chart below shows the source of radiation and exposure on an annual basis.

Average Yearly U.S. Radiation Exposure in mRem/year



The effects of large amounts of radiation are well understood; however, effects of small amounts of radiation are not clear. Federal guidelines suggest that there is risk with any exposure to radiation, even from one of the sources listed on the chart.

The main concern is the cumulative risk of radiation exposure over a period of several years. Therefore, exposures to small amounts of radiation are considered less risky than large amounts of radiation.

Exposure exceeding 150,000 to 600,000 mRem can produce symptoms of radiation sickness. An exposure of 600,000 mRem, left untreated, could be fatal. The limits used in the REP program are designed to limit your exposure. Adhering to these limits will reduce the risk of developing any observable symptoms and reduce the risk of cancer in the future.

Quick Start Guide: Ludlum 25

Electronic Dosimeter

The dosimeter can be read directly in the field and has preset exposure limits and will alarm and/or vibrate when the limits are reached.

How to operate your Electronic Dosimeter

- Press and hold On/Acknowledge button for three seconds until LCD screen turns on.
- Screen should normally read 0.00 mR/hr, but may pick up background radiation .03 to .05 mR/hr.
- Make sure battery indicator shows full.
- Pressing the ACK button allows user to silence the alarm. The alarm will resume alarming again after 60 seconds.
- You may use a check source to check the equipment. Equipment will read an "F" and 0.00 will flash if the unit is not reading properly.

Contact your supervisor or radiological officer if your dosimeter is not working correctly.

Further instructions on how to use your electronic dosimeter can be found on page 31 of this handbook.

Quick Start Guide: TLD

Thermoluminescent Dosimeters (TLD)

A TLD records the amount of radiation from an individual exposure. It should be worn on the front of the body between the waist and shoulders. The TLD provides a permanent record of exposure after processing in a laboratory. The serial number will be recorded on the Emergency Worker Dosimeter Log.

While a TLD provides an accurate record of exposure, it cannot be read in the field by the responder. In order to allow workers to monitor their exposure while working, a second type of dosimeter, a Direct Reading Dosimeter (DRD), will be issued to each emergency worker or group of workers.

Quick Start Guide: Self Reading Dosimeter (SRD)

Direct Reading Dosimeter (DRD)

A DRD is designed to work alongside the TLD. It gauges any exposure an emergency worker receives and can be read directly in the field. Individuals can take the appropriate action based on the reading shown.

How to Read Your DRD

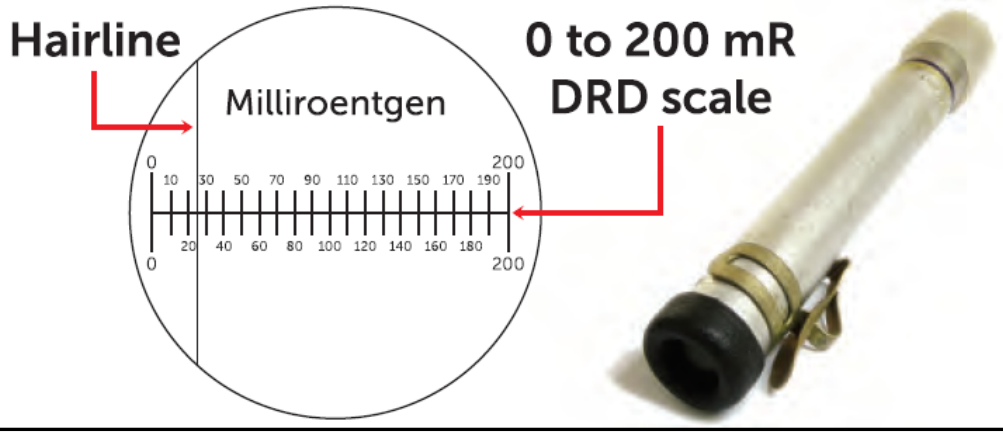
Note the scale:

- On a High Range DRD (CDV 730), the scale is listed in Rem with a range of 0-20 R.
- On a Low Range DRD (CDV-138), the scale is listed in mR with a range of 0-200 mR.
- Point it toward an ambient light source.
- Note the position of the hairline (see example below) to establish a "baseline" for future readings.
- Read and record your DRD reading every 30 minutes on the "Emergency Worker Exposure Log".

Contact your supervisor or radiological officer if you drop the dosimeter and the reading changes or if you lose your TLD or DRD.

Instructions on the use of DRDs and TLDs can be found on the next pages. These instructions should be reviewed and followed when you are on an assignment.

- All DRD's shall be zeroed prior to use.



Quick Start Guide: Self Reading Dosimeter (SRD)

1. Self Powered Dosimeter Charger (CDV-750 M6)

a. The CDV-750 M6 dosimeter charger (figure 1) can be used to zero all DRDs. The charger is self powered, requiring no batteries. The voltage necessary to charge a dosimeter is generated by squeezing the generator lever. A discharge button allows the operator to set a dosimeter exactly on zero. The clamp trigger pulls on the clamp to allow a dosimeter to be positioned on the charger or be removed from the charger. The charger controls the movement of the hairline fiber inside the dosimeter. When the fiber is on zero, the dosimeter is said to be "zeroed".

b. Charging The Dosimeter

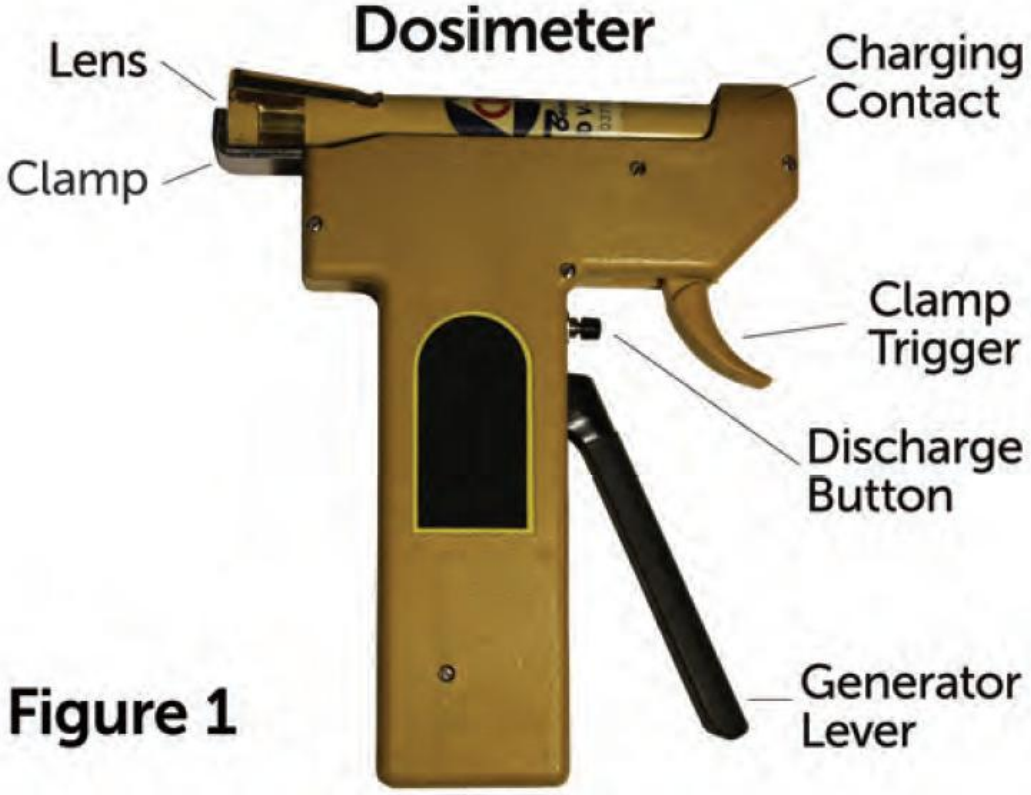


Figure 1

Quick Start Guide: Self Reading Dosimeter (SRD)

1. Hold the charger upright as shown in figure 1. Lift the clamp and pull it back to its maximum length. Place the dosimeter in the clamp and fit the dosimeter recess (opposite end from the lens) over the charging contact. This allows for electrical contact between the dosimeter and the charger.
2. Squeeze the clamp trigger. Push the clamp forward until the end is against the eyepiece of the dosimeter.
3. Release the trigger. Check that the position of the dosimeter provides a good view through the lens.
4. With the dosimeter locked in place and lens facing you, point toward a suitable light source, such as a light fixture, window, candle, etc., as shown in figure 2.
5. Look through the lens and observe the scale (figure 3). Squeeze the generator lever and release lightly a few times.

NOTE: If the dosimeter Is not responding, you may need to apply more pressure with the clamp by gently pushing forward on the clamp against the end of the dosimeter. DO NOT PUSH TOO HARD. You can damage the dosimeter.

Quick Start Guide: Self Reading Dosimeter (SRD)

6. Watch for movement of the fiber from the right of the scale towards 0. Squeeze the lever again if needed to zero the dosimeter. NOTE: If the fiber has travelled to the left of the zero but is still visible, push the discharge button and watch the fiber move to the right. If the fiber is not visible, repeat Step 5.
7. To remove the dosimeter, pull clamp trigger, lift dosimeter to just above the end of clamp and pull dosimeter straight back to disengage it from the charging contact. The length of the clamp will not change unless the clamp is manually adjusted.

c. READING THE DRD

To read the DRD direct the bottom of the barrel at a light source. Look through the eyepiece at the top and rotate the DRD so the scale is right side up with the zero on the left. Read the location of the hairline on the center scale, estimating to the nearest whole number. Record this information on your Personal Radiation Exposure Card (REP-I). You should read your DRDs at least every 30 minutes and report any exposure (hairline movement) to your supervisor.

Radiation Protection

Exposure Limits

Note: For the purpose of tracking exposure in the REP program:
1 Roentgen ≈ 1 Rem
1,000 mR ≈ 1,000 mRem

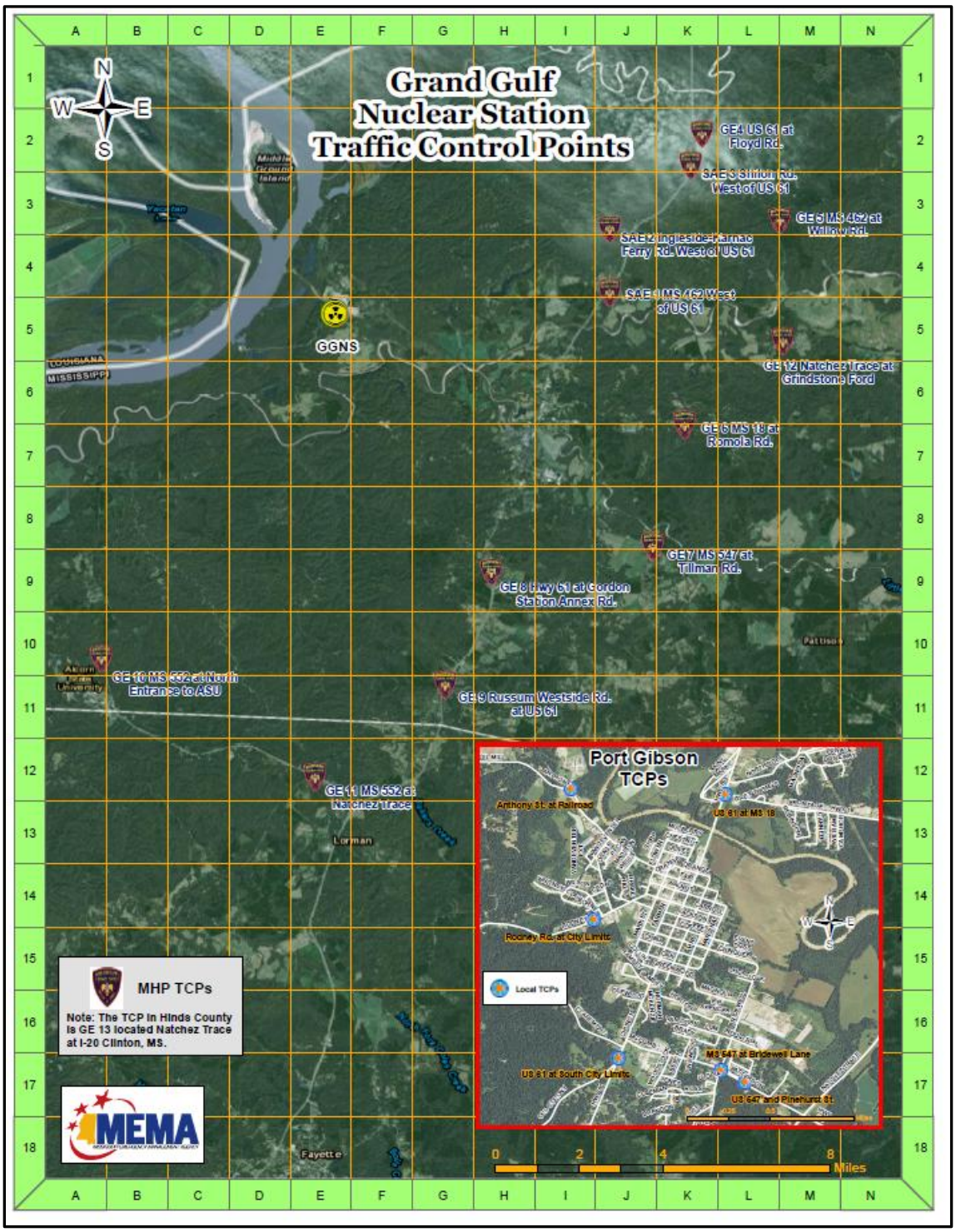
Mississippi Emergency Worker Dose Limits

Mississippi workers performing emergency services in radiological events are assigned a base dose limit of 5 rem Total Effective Dose Equivalent (TEDE) for standard response activities, with a turn-back limit of 1R as read on their dosimeters for normal work activities.

Critical situations may justify higher emergency worker dose limits to protect the people of Mississippi. A dose limit of 10 rem is allowed for the protection of key resources and critical infrastructure, with a turn-back limit of 2R as read on self-reading dosimeters. A dose limit up to 25 rem is allowed for life saving activities and the protection of large populations, with a turn-back limit of 5R. These values are summarized in the table below:

Dose Limit	Turn-Back Limit	Response Activity
5 rem	1R	Standard Response
10 rem	2R	Protection of Critical Infrastructures/Key Resources
25 rem	5R	Lifesaving or Protection of Large Populations

Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab K (Planned Access Control Point Numbers)



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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab L (Reentry Badge Examples)

REENTRY BADGE EXAMPLES

REENTRY BADGES

AREA

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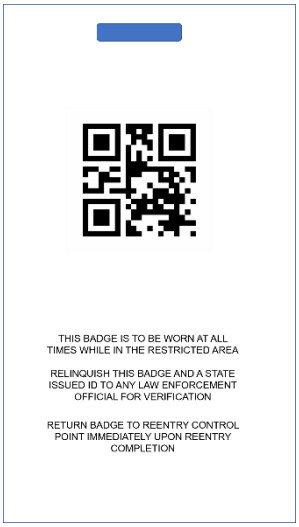

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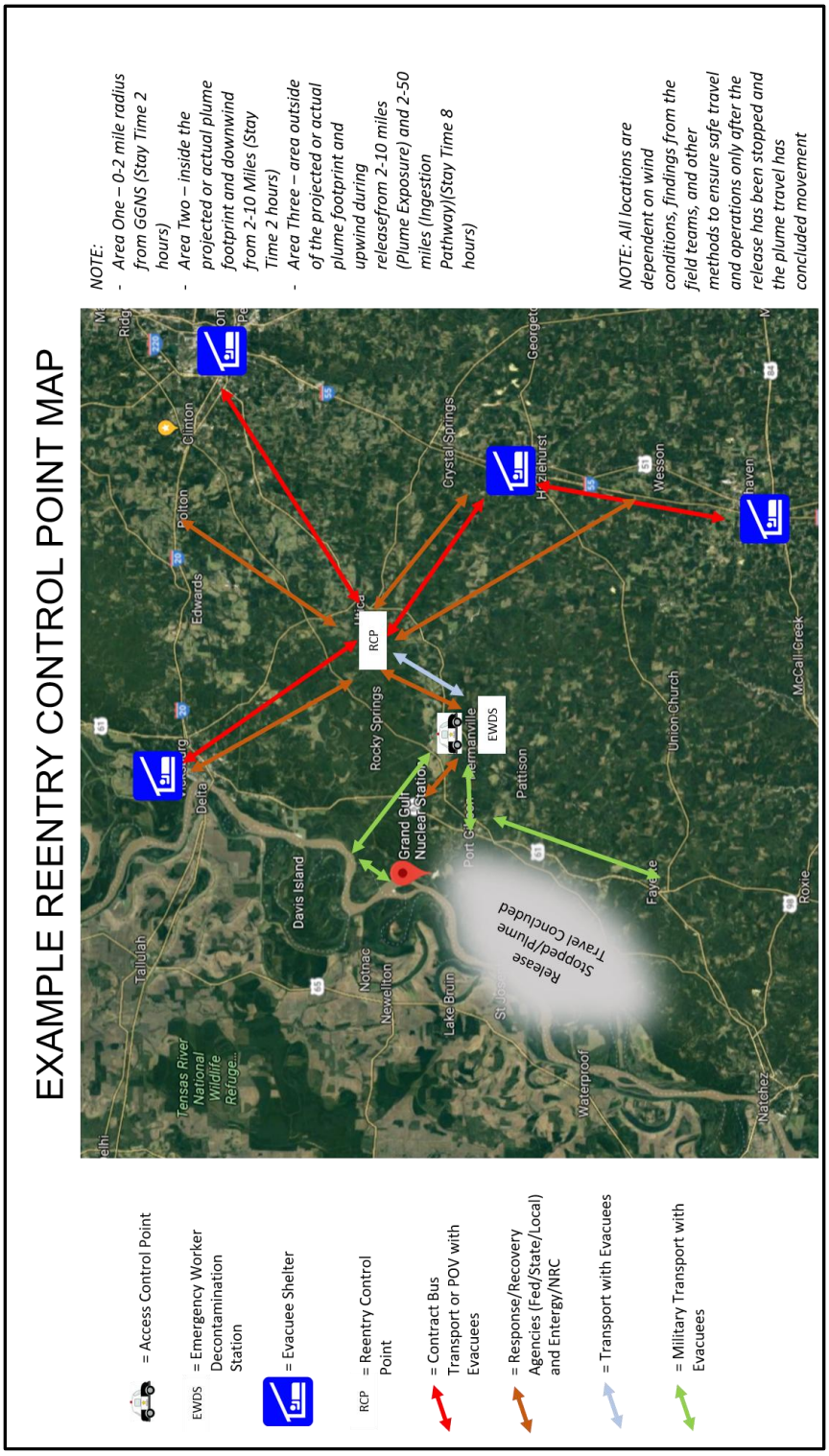
Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab M (Example Reentry Control Point Map)



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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab N (Reentry Control Point Operations)

1. REGISTRATION AREA – PARTS A & B.

a. Interested Entrants report to the Registration Desk the Reentry Control Point (RCP).

b. Restricted Area County representatives will determine the validity of the interested Entrant's identification, a destination within the Restricted Area, and the need to reenter.

c. Entrant will receive a copy of the Reentry Checklist (Annex H, App 2, Tab G).

d. The Entrant must always keep the RCP Checklist with them until return to the RCP.

e. Registration personnel will complete blocks: Part A & Part B.

(1) If Entrant authorized access, request the Entrant move to the Entry Information Area.

(2) If unauthorized Restricted Area access, the interested Entrant will depart the premises; if transported to the RCP, direct the interested Entrant back to the area where they can be transported back to their place of origin.

2. BADGING AREA – PART C. Issue Appropriate Badge, Wristband, or not required based on the RCP Checklist also listed below.

a. Utilize the Entrant's Organizational Badge if enters through this RCP.

b. Restricted Area Badge to (ORANGE):

(1) Infrastructure Repair and Protection

(2) Tending to Livestock and Exhibition Animals

(3) EPZ and IPZ County Representatives (Local Government)

(4) State Oversight and Assistance (State Government)

(5) Federal Oversight and Assistance (Federal Government)

(6) Relief Agencies

(7) Health Care Agencies

c. Restricted Area Wrist Band to (GREEN):

(1) Other Industrial Processes / Utilities

(2) Access and Functional Needs

(3) Insurance Agents

(4) Farmers (general)

(5) Business Operators

(6) Residents

3. ENTRY INFORMATION AREA – PART D.

a. Entrants will be briefed on the Area designation of their destination in the Restricted Area, Stay Times and Dose Limits, and Escort Requirements if needed.

b. Entry Information Area personnel will complete blocks in Part D.

4. EQUIPMENT AREA – PART E.

a. Issue Personal Radiation Exposure Record Card

b. Issue the appropriate equipment

c. Issue KI is approved and required

d. Issue the appropriate PPE

4. BRIEFING AREA – PART F. Conduct Classroom Briefings on:

a. Equipment Issued

b. PPE Issued / Donned

c. Access Control Point process

d. Emergency Worker Decontamination Station process

e. Steps to depart the Restricted Area

5. RCP REGISTRATION COMPLETION AREA – PART G.

a. Verify Completion of the RCP Checklist – Sign RCP Checklist

b. Provide a copy of the completed RCP Checklist (entrant must keep a copy until return to the RCP; show RCP Checklist to ACP, Emergency Worker Decontamination Station (EWDS), and RCP upon return)

c. Annotate information on Reentry Tracking Form

d. Copy completed forms and bring to the RCP Final Processing Area

e. Inform Entrant of which area to wait for specific transportation to the Access Control Point

f. If the entrant is issued a badge and has an organizational vehicle, may utilize it to enter the restricted area, but it must pass EWDS monitoring for removal from the Restricted Area

6. Transportation from RCP to ACP is conducted by uncontaminated National Guard resources or Charter buses. Personnel will be loaded in transportation based on similar drop office points in the Restricted Area.

7. ACCESS CONTROL PONT (ACP) – PART H.

a. Document Entry Time into Restricted Area

b. Scan RCP Badge / Wristband as needed

c. Entrants will remain in assigned groups and move to Restricted Area Transportation

8. TRANSPORTATION INTO THE RESTRICTED AREA.

a. Transportation will be provided to specific drop off locations within the Restricted Area.

b. Entrants will be made aware of specific drop off and pick up times to be transported back to the EWDS for the appropriate departure of the Restricted Area before Stay Time violations.

c. Transportation personnel will be monitored by organization assets to ensure Stay Time violations do not occur.

d. Transportation will make the appropriate scheduled rounds to the drop-off / pick up points in the Restricted Area to ensure Entrants can exit when required.

e. Entrants will be transported to the EWDS for processing before departure from the Restricted Area

9. EMERGENCY WORKER DECONTAMINATION STATION (EWDS) – PART I.

a. Document Exit Time from the Restricted Area

b. Scan RCP Badge / Wristband as needed

c. Collect Dosimetry, Radiation Survey Meter (if assigned), and Personal Radiation Exposure Card

d. File Personal Radiation Exposure Card

e. Annotate collected equipment and reading from assigned Dosimetry onto the RCP Checklist in Part I.

f. Equipment will be monitored and decontaminated appropriately and delivered to the RCP Equipment Area for redistribution. Equipment unable to be decontaminated, contact must be made to MEMA Radiological Staff.

g. After Monitoring and Decontamination, PPE will be discarded, and personnel will exit the EWDS to transportation point for movement to the RCP for final processing.

h. Entrant must still be carrying the RCP Checklist.

10. RCP REGISTRATION FINAL PROCESSING AREA – PART J.

a. Collect RCP Checklist

b. Verify Entrant information and Stay Times are in the Badge / Wristband system

c. Annotate information on the Reentry Tracking Form for accountability

d. If Entrant drove to the RCP, the entrant may depart

e. If Entrant was transported to the RCP, direct them to the appropriate transportation point for movement to their place of embarkation

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Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab O (Reentry Control Point Staffing)

1. STAFFING OF THE ENTRANT RCP.

a. Registration Area – representation from each county included in the Approved Reentry Area. (one member from each county in the restricted area, one additional staffer to assist each county)

b. Must have documentation or reach back/computers to verify entrant addresses

c. Badging Area –MEMA Disaster Reservists or volunteers (5 personnel)

d. Must have training and access to the Badging and Wrist Band Systems

e. Entry Information Area – MS State Department of Health / Division of Radiological Health (MSDH/DRH) personnel (5 personnel)

f. Equipment Area - MEMA Disaster Reservists / REP Personnel (5 personnel)

g. Briefing Area – MEMA Disaster Reservists / MEMA Personnel (2 MEMA Trainers, 2 Disaster Reservists)

h. RCP Registration Completion Area – MEMA Disaster Reservists/Volunteers (4 personnel)

i. Transportation from RCP to ACP – National Guard drivers and resources or contract busses and personnel (4 drivers, 4 assistant drivers, 4 personnel carriers (bus or military vehicle))

j. Access Control Point – Law Enforcement / National Guard (4 Law Enforcement and 6 National Guard personnel to staff entrance and exit areas of the ACP)

k. Transportation in Restricted Area – National Guard Personnel and Resources (8 drivers, 8 assistant drivers, 8 personnel carriers (bus or military vehicle that will remain in the Restricted Area until properly monitored and decontaminated))

l. Emergency Worker Decontamination Station – Fire Department and National Guard personnel (30 total personnel)

m. RCP Registration Final Processing Area - MEMA Disaster Reservists / Volunteers / National Guard personnel (4 total personnel)

2. STAFFING OF THE ORGANIZATIONAL RCP (if separated from the Entrant RCP).

a. Staffing will be similar to the Entrant RCP with the addition of the registration table operated by Emergency Support Function (ESF) liaison staff.

b. Staff will verify the identification of Organizational personnel with their Organization Badge and another form of State Issued Identification to verify the validity of the person

c. Personnel entering this RCP will be (YELLOW):

(1) Radiological Sampling and Monitoring

(2) Public Health

(3) Law Enforcement

(4) Fire

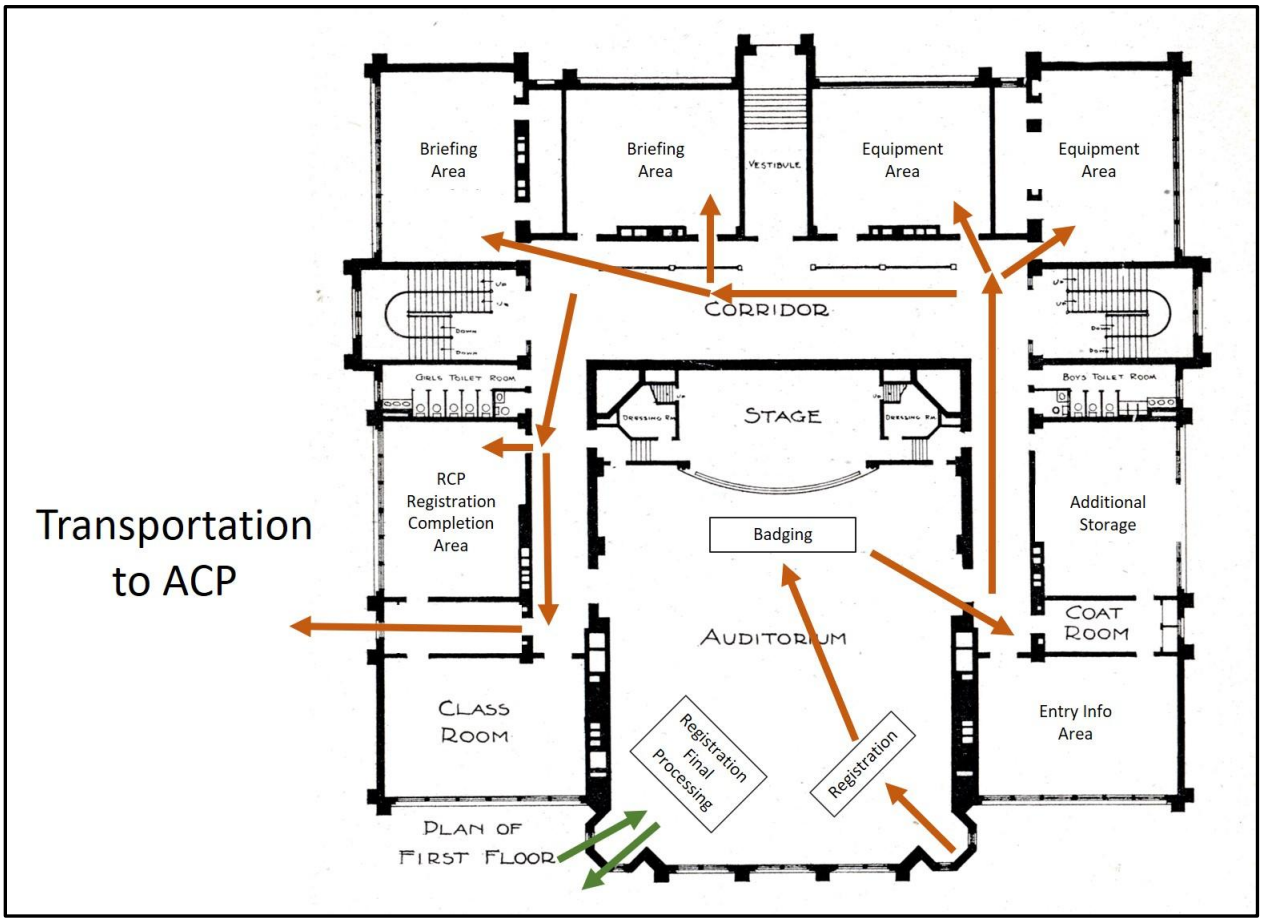
(5) Emergency Medical Services (EMS)

(6) Search and Rescue

(7) Entergy Grand Gulf Utility personnel

(8) Animal Rescue and Control

Annex H (Recovery, Reentry, and Relocation)
Appendix 2 (Procedures for Reentry Following a Radiological Incident)
Tab P (Example Reentry Control Point Setup)



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Annex H (Recovery, Reentry, and Relocation)
Appendix 3 (Reentry Matrix: Quick Reference to Operational Guidelines)

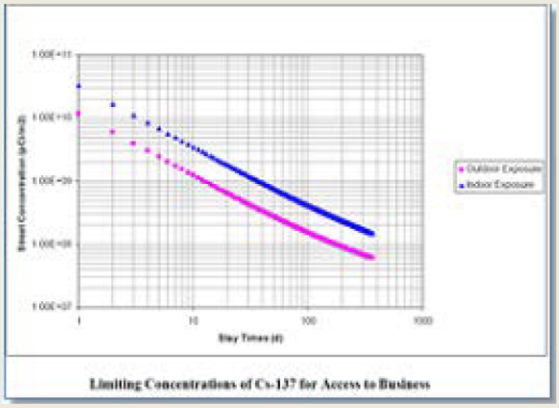
PHASE	ACTIVITY	SUGGESTED LEVELS	CLEANUP ACTIONS[b]
Early Phase	**Sheltering or Evacuation for the Public**	**Public**: 1-5 rem (10-50 mSv) projected over four days (see Chapter 2). A decision to evacuate weighs anticipated dose against feasibility of evacuating within a determined time frame, along with the risks associated with the evacuation itself.	It is too early for organized cleanup, due to chaos of the situation and higher priorities such as lifesaving activities and clearly identifying shelter and evacuation zones. Any cleanup or decontamination information should focus on personal decontamination. It is doubtful any large-scale effort could change evacuation or shelter recommendations during this period (first 4 days). Once evacuation is completed, there are simple actions that cities can implement themselves: rinsing roofs and streets, street sweeping. The objective of these actions is to move the bulk amounts of contamination away from occupied areas or areas where reoccupation is a priority. These actions should be based on measured amounts of contamination and priority of the location. Workers may face high dose levels and will need health physics support.
	Emergency Worker Protection	**Emergency Worker**: 5/10/25 rem (50/100/250 mSv) incurred over the response duration. The higher limits are based on task (e.g., protecting large populations or critical infrastructure or lifesaving). Emergency worker doses will be tracked with dosimeters. Emergency workers have knowledge of the risks associated with radiation exposure, training to protect themselves, and dosimeters to track their doses (see Chapter 3).	
Inter-mediate Phase	**Relocation for the Public**	**Public**: 2 rem (20 mSv) projected first year, 0.5 rem (5 mSv) per year projected in subsequent years (see Chapter 4). In this phase, scientists run dose calculations with RESRAD-RDD or Turbo FRMAC; the user can choose sensitive age groups, or enter lower guidelines, if desired. Additionally, local decision-makers can adapt the guidelines with incident-specific considerations and implement variations as needed.	Early cleanup efforts should focus on the removable portion of the contamination: vacuuming, washing, vegetation removal. ▪ Vacuuming has the advantage of collecting removable contamination without water or surface impact, but is limited by equipment availability and can also expose the operators to high dose levels as the vacuums collect the contamination. ▪ Washing and rinsing are simple to implement, but only move the contamination to less-populated areas and may move contamination deeper into porous surfaces. ▪ For unpaved areas, vegetation removal can effectively reduce the amount of contamination present, but is labor intensive and can produce a large amount of waste.

PHASE	ACTIVITY	SUGGESTED LEVELS	CLEANUP ACTIONS[b]
Intermediate Phase	**Reentry For Use of Critical Infrastructure**	**Public**: 2 rem (20 mSv) in first year (Preliminary Report on Operational Guidelines Developed for Use in Emergency Preparedness and Response to a Radiological Dispersal Device Incident,[c] *Operational Guidelines Group C*). Dosimeters could be considered for the public.	Having addressed the removable part of the contamination, later efforts can focus on fixed contamination. ▪ Paved surface removal is very effective, but requires specialized equipment and trained operators. ▪ Surface sealing is easier, but leaves the contamination in place, making it viable only in locations where the dose rates are low enough for occupation, or in low-occupancy areas. ▪ Repaving roads, lots and other paved surfaces is easy to implement, but can generate significant waste volumes. ▪ Unpaved areas can be further remediated by soil skimming (surface removal), deep plowing (turning the top foot or so of soil over), and appropriate chemical soil amendment methods like liming or chelating. As the intermediate phase progresses, knowledge and experience increases and these methods can be re-applied, refined or customized for problem areas. Decisions about more difficult areas will benefit from professional judgment, additional analyses, and application of more sophisticated technologies.
	Emergency Worker Protection	**Emergency Worker Protection**: (dose not to exceed) 5 rem (50 mSv) per year (*Radiation Protection Guidance to Federal Agencies for Occupational Exposure*, EPA 1987). Emergency workers have knowledge of the risks associated with radiation exposure, training to protect themselves, and dosimeters to track their doses (see Chapter 3). During an incident response, workers (police, waste handlers) needed in contaminated areas could be trained and given dosimeters. The guidance for emergency workers applies throughout the response.	
	Reentry For Use of Roads and Walkways	**Public**: 2 rem (20 mSv) first year, 0.5 rem (5 mSv) per year in subsequent years (*Operational Guidelines, Group E*). While the dose values here are similar to those for Use of Critical Infrastructure above, the derived concentrations measured as triggers are different because the exposure conditions are different.	

<table>
<tr><th>PHASE</th><th>ACTIVITY</th><th>SUGGESTED LEVELS</th><th>CLEANUP ACTIONS[b]</th></tr>
<tr><td>Inter-mediate Phase</td><td>Reentry
For Access to the Relocation Zone

"Stay time" is a term of art used in the radiation safety field. Stay times are the amount of time a person may access the contaminated area. These times vary based upon site-specific factors or incident character-istics such as indoor or outdoor work, sensitive populations, and level of radioactivity.</td><td>Public: 0.5 rem (5 mSv) over one year for temporary access with stay times (see definition below) dependent on reentry tasks and site-specific conditions (Operational Guidelines, Group D).

Section 7.1 of the Operational Guidelines, "Worker Access to Businesses for Essential Actions," provides tables and graphs of stay times at various limiting concentrations (see adjacent graph and table). For example, if the maximum surface street concentration of Cesium-137 is 3.00E+09 pCi/m^2 (1.11E+08 Bq/m^2), people limited to 0.5 rem (5 mSv) should be in the contaminated area less than four 8-hour days if staying outdoors.

This may apply to individuals retrieving belongings from homes or to workers providing security patrols, or even to people reopening businesses in the area. As contamination levels are reduced during cleanup, stay times can be extended and total doses reduced.</td><td>These graphics below are examples based on Operational Guidelines.[c] Please refer to the full report for tables and graphics for use in emergency preparedness.
 

Operational Guidelines for 0.5 rem Annual Dose: Residents Access to Houses (Indoor Exposure)
<table><tr><th></th><th colspan="3">Surface Street Concentration (pCi/m^2)</th></tr><tr><th>Radionuclide</th><th>1 Day</th><th>4 Days</th><th>12 Days</th></tr><tr><td>Am-241</td><td>7.51E+07</td><td>2.86E+07</td><td>1.59E+07</td></tr><tr><td>Cf-252</td><td>3.50E+08</td><td>1.32E+08</td><td>7.13E+07</td></tr><tr><td>Cm-244</td><td>1.27E+08</td><td>4.82E+07</td><td>2.68E+07</td></tr><tr><td>Co-60</td><td>2.72E+09</td><td>6.87E+08</td><td>2.33E+08</td></tr><tr><td>Cs-137</td><td>1.14E+10</td><td>2.94E+09</td><td>1.01E+09</td></tr><tr><td>Ir-192</td><td>9.93E+09</td><td>2.54E+09</td><td>8.92E+08</td></tr><tr><td>Po-210</td><td>1.17E+09</td><td>3.86E+08</td><td>1.74E+08</td></tr><tr><td>Pu-238</td><td>6.56E+07</td><td>2.50E+07</td><td>1.39E+07</td></tr><tr><td>Pu-239</td><td>6.01E+07</td><td>2.29E+07</td><td>1.27E+07</td></tr><tr><td>Ra-226</td><td>6.08E+08</td><td>2.10E+08</td><td>9.97E+07</td></tr><tr><td>Sr-90</td><td>2.48E+10</td><td>7.70E+09</td><td>3.18E+09</td></tr></table></td></tr>
<tr><td colspan="4">Operational Guidelines provide stay times and concentrations for several different sets of assumptions about the exposure. Residents retrieving possessions may spend most of their time indoors, where stay times are longer than they are for outdoor tasks. Stay time recommendations can be used to guide decisions about allowing entry into the contaminated area for a limited time and dose reduction techniques like wearing dust masks, cleaning shoes and car tires upon exit, and using time wisely to keep radiation exposure "ALARA" below the Operational Guideline.</td></tr>
</table>

[a] This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

[b] This cleanup process does not rely on and does not affect any authority, including the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9601 et seq. and the National Contingency Plan (NCP), 40 CFR Part 300. This document expresses no view as to the availability of legal authority to implement this process in any particular situation.

[c] The Operational Guidelines were developed by federal agencies and published by DOE in February 2009, DOE/HS-0001; ANL/EVS/TM/09-1, online at http://web.ead.anl.gov/resrad/documents/ogt_manual_doe_hs_0001_2_24_2009c.pdf. (DOE 2009)

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Annex I (Ingestion Exposure Pathway)

1. PURPOSE. To outline the methods and actions for the protection of the human food chain, including animals, foods, and water, which may be contaminated by a radioactive release from GGNS or RBS.

2. CONCEPT OF OPERATIONS.

a. General.

(1) The Ingestion Exposure Pathway protective action response enables the MSDH/DRH, Mississippi Department of Agriculture and Commerce, Board of Animal Health, and the Mississippi State University - Extension Service to ensure that exposure to radiation through the food chain is minimized. This may involve restricting public consumption of contaminated drinking water and agricultural products.

(2) Contaminated lands, agricultural products, and water will be identified through environmental and product sampling. This sampling will be undertaken by MSDH/DRH through dose assessment and plume modeling in a timely fashion to notify supporting agencies. These supporting agencies will include those under ESF-11 and supporting agencies. Sampling is to be performed in a manner that permits sufficient time for action to be taken at an early stage in the farm-processor-retail market cycle. Methods of radionuclide measurement will include complex laboratory methods, rapid analytical methods employing simple lab or modified field techniques, and field methods using conventional radiation survey instruments. In general, these analyses will determine the protective action response. The state may recommend one or both of two types of protective responses that apply to all consumables.

(a) **<u>Preventive protective actions</u>** that are taken to prevent or reduce contamination of milk or food.

(b) **<u>Emergency protective actions</u>** that are taken to isolate consumables to prevent the introduction to commerce and to determine whether condemnation and/or other disposition is appropriate.

b. Operational Procedures.

(1) Implementing the Ingestion Exposure Pathway for dairy and other agricultural products will include:

(a) Increasing the frequency of air sampling near the fixed nuclear facility. This frequency may increase from weekly assessments to 3 times per week. MSDH/DRH will also set up portable sampling stations.

(b) Initiating field survey readings within the 50-mile ingestion pathway EPZ. This will depend on the size of the release, available manpower, and available meteorological data.

(c) Informing owners to place their livestock on stored feed and protected water. MDAC has a public information SOG under separate cover. MSU/ES will assist in providing information to agricultural operators in the affected areas.

(d) Initiating sampling of water, milk, and vegetation within the 50-mile ingestion pathway EPZ. This will start within 12 to 24 hours after the incident.

(e) Establishing liaison with the industry receiving milk and other food products from the affected area.

(2) Should sampling indicate that the projected dose equals or exceeds the PAGs, MSDH/ DRH Director may recommend one or more of the following protective actions:

(a) Shelter animals and ensure they have a source of uncontaminated water and stored feed.

(b) Move livestock from affected areas when possible. This is dependent upon factors such as Time of release, availability of equipment, manpower, and available receiving facilities. This will be coordinated through ESF-11.

(c) Use uncontaminated powdered or canned milk for children, lactating mothers, and pregnant women.

(d) Condemnation of milk, milk products, and/or other food products and their disposal.

(3) Agricultural Protective Actions. The area that may be embargoed will be determined based on the conditions at the time of the incident. There is a wide variety of agricultural protective measures that may be implemented as needed and can only be defined at the time of the incident based on release conditions. The Radiological Emergency Information for Farmers, Food Processors, and Distributors brochure details some of that information. The protection of the food supply from contamination of radioactive material is the top priority and actions taken to protect

the food supply will be coordinated with the impacted counties during the incident. Protective Actions and guidelines for proper disposal of contaminated products will be coordinated through the SEOC at the time of the incident. Implementing the ingestion exposure pathway response for other agricultural products may include:

(a) Determine the types of products produced in the affected area. (This may be done as a part of the planning sequence with the use of land use maps). These maps would be part of the request made from MDAC and MBAH through the Governor's office to the USDA/ Farm Services Agency.

(b) Establish liaison with the industries receiving products from the affected area.

(c) Dependent upon the time of crops harvest cycle, a response may not be necessary

(d) Implement procedures for the collection and disposal of contaminated products. Procedures will be coordinated through ESF-11.

(e) Embargo food products that come under the jurisdiction of MDAC and MSDH pending sampling analysis.

(f) Advise farmers and home gardeners to wash, brush peel, or dispose of fruits and vegetables depending on the contamination levels.

(g) Condemn contaminated and/or affected meat, vegetable, and fruit products from the marketplace and recommend disposal procedures of the products.

(h) Prohibit the use of unprotected grains and animal feed and recommend disposal procedures of the products.

(i) Prohibit or alter the use of agricultural land to allow for the decay of radioactive materials and dispose of contaminated material (such as row crops, hay, or grasses).

(4) Implementing food ingestion pathway response for water may include:

(a) Identify public water sources and private wells that may be affected by the release. This will be coordinated through ESF-8 and supporting agencies.

(b) Establish liaison with the water supply operators. Notify watershed districts.

(c) Alert the public through public information channels that the water supply may be contaminated. Notify and alert downstream users with recommend protective actions.

(d) Advise the public to use protected or uncontaminated sources of water.

(e) Prohibit the use of contaminated water except for sanitary and firefighting purposes.

(f) Establish special water treatment such as special filtration or lime-soda ash softening or activated charcoal.

(g) Determine through sampling if water supplies in the area are safe for human and animal consumption. Determine priority for the sampling of those supplies.

(h) Collect raw water samples near the sources of contamination to establish whether gross contamination of raw water is evident. The groundwater source should be monitored over an extended period to ensure that it has not been affected.

(i) Isolate all affected contaminated wells. All open wells, cisterns, barrels, and other open water collecting containers should be covered to prevent radioactive fallout from hitting open water surfaces.

(j) For storage containers which are supplied by runoff from roofs or other surface drain areas, the collecting filler pipe should be disconnected to prevent contaminants from being washed into the storage containers.

(k) Domestic surface water supplies may be contaminated by either the accidental discharge of contaminated water or by deposition from an atmospheric release. Spring and well water should not be affected by an accidental release of radioactive material to the atmosphere or waterways.

(l) The contamination of domestic water supplies following the discharge of contaminated water is possible only for downstream supplies using the receiving water body as a source. The adverse impact can be avoided by curtailing intake during the passage of the contaminated water.

(m) In situations involving the contamination of water supply, methods of providing an alternative water supply may include rationing of uncontaminated supplies, the substitution of other beverages, importing water from uncontaminated areas, and the designation of certain critical

users.

c. Responsibilities.

(1) Mississippi State Department of Health.

(a) Division of Radiological Health.

- Technical support to Governor/State EOC on protective measures.

- Coordinates and directs sampling, monitoring, laboratory analyses, and activities in the Ingestion Exposure Pathway EPZ.

- Makes protective response recommendations regarding the Ingestion Exposure Pathway EPZ.

- Uses published response levels and protective actions that the state/local government implements for both preventive and emergency actions regarding the Ingestion Exposure Pathway EPZ.

- Assists in the development of public information and education materials directed to farmers, food processors, and distributors.

- Communicate and coordinate with the licensee, State Emergency management, and counties on changes in status.

- Coordinates with Federal Radiological Monitoring Support (FRMAC).

- Utilizing Protective Action Decisions, provide technical assistance to MEMA in reoccupation activities previously activated or relocated if deemed safe for temporary or permanent return.

(b) Bureau of Environmental Health.

- Provides advice to dairy operators, commercial farmers, and water supply operators of potential contamination in the affected area.

- Provides for the diversion of food and milk away from retail markets until radio analyses are performed and evaluated.

- Provides an up-to-date listing of milk producers/dairies within FNF EPZs. Has oversight for the disposal of milk products in the affected area.

(2) Mississippi Emergency Management Agency.

(a) Coordinates state resources to protect the human food chain.

(b) Provides communication to affected areas to support ingestion pathway activities.

(c) Assists in the implementation of protective response.

(d) Develops public information and educational materials directed at farmers, food processors, and distributors with the assistance of MSU/ES.

- Information is disseminated annually to farmers, food processors, and distributors within the 10-mile EPZ.

- Information for implementing protective actions within the 50-mile EPZ is disseminated in the event of a Site Area Emergency or General Emergency at GGNS or RBS.

(e) Activate and operate Emergency Facilities and equipment.

(f) Coordinate Protective Action Decisions.

(g) Keep the General Public informed of the status of the incident, Protective Action Decisions.

(h) Serve as a conduit to Federal Support.

(i) Communicate and coordinate with licensee and counties on changes in status (plant and protective measures).

(j) Coordinate the relocation of residents who were not previously evacuated.

(k) Coordinate Reentry Activities.

(l) Retrieve GIS information and electronic files from Ingestion agencies for situational awareness program use.

(3) Department of Wildlife, Fisheries, and Parks.

(a) Provides personnel and equipment to assist MSDH/DRH in monitoring and sampling activities.

(b) Assists in implementing preventive and emergency protective action activities within the Ingestion Exposure Pathway EPZ to include: closure of parks; providing hunting and fishing restrictions inside and outside of the restricted areas to control the spread of contamination of affected animals.

(c) Provide updated GIS information and files to the MEMA GIS coordinator for situational awareness program use.

(4) Mississippi Department of Agriculture and Commerce.

(a) Assists in monitoring and sampling activities to assess the radiological impact within the Ingestion Exposure Pathway EPZ.

(b) Assists in the implementation of preventive protective actions.

(c) Assists in the implementation of emergency protective actions that primarily involve the interdiction or condemnation of feeds, foods, land, crops, or other contaminated products.

(d) Aids in the development and the dissemination of public information to farmers, processors, and distributors in the food production business. Coordinates the disposal of animal feed.

(e) Serves as liaison between state response organizations and the USDA.

(f) Provides an up-to-date listing of meat processing/slaughtering plants within FNF EPZs.

(g) Through ESF 11, liaise with outside agencies to retrieve information on row cropland use.

(h) Provide updated GIS information and files to the MEMA GIS coordinator for situational awareness program use.

(5) Mississippi State University - Extension Service (MSU/ES).

(a) Assists in the dissemination and implementation of preventive and emergency protective actions within the Ingestion Exposure Pathway EPZ.

(b) Provides liaison between the local county agents and other state response organizations.

(c) Provides PIO from MSU/ES Ag Communications to SEOC to assist with disseminating information producers.

(d) MSU/ES county educators, specialists, and agents will work in support of ESF 11 efforts to shelter animals and ensure there is a source of uncontaminated food and water. In most instances, these animals will be sheltering in place because of stop movement orders or the lack of timely notice and availability of equipment to adequately ensure transportation outside the Ingestion Pathway Exposure Pathway Zone.

(e) The MSU Extension Family and Consumer Science Nutrition Program will work daily with the Mississippi State Department of Health and Mississippi State Department of Human Services concerning the use of uncontaminated commodities and milk. Utilizing ESF 11 would speed the message and perception of the orderly implementation of the plan.

(f) Utilize ESF 11 for vegetables, honey, milk, and fruit sold locally through Farmers' Markets, to employ a USDA program to increase awareness and utilization of backyard plots and locally grown and sustainable agriculture. This process would accelerate the messages to growers and producers, quickly helping ensure food system safety.

(g) About the condemnation or diversion of use of land for agricultural purposes, MSU/ES will utilize trained strike teams to conduct agricultural damage assessments. MSU/ES will liaise with county Boards of Supervisors to facilitate understanding and acceptance of these actions. Utilization of the already built relationship between the grower/producer and the MSU/ES is a valuable connection to ensure understanding and compliance with the needs of the state

(h) The MSU/ES county agents will work with growers, producers, and ESF 11 to ensure proper disposal of deceased animals.

(i) MSU/ES will work with private well owners, small water systems, and associations through contracts and programs with the Mississippi State Department of Health, the U.S. Environmental Protection Agency, and USDA concerning water quality and testing.

(j) Every MSU/ES county agent, specialist, and professional will support any request for services and use of offices or equipment in the affected counties. Each county will use existing channels of communication to get out accurate and informative information to clients, citizens, and stakeholders.

(k) MSU/ES mass care strike teams can be dispatched to those previously identified shelters to work in support of local emergency management, MDHS, and MSDH.

(l) Through ESF 11, MSU/ES can assist with liaison and retrieving information on row cropland use.

(6) Mississippi Board of Animal Health.

(a) Coordinates the disposition of contaminated farm animals and household pets.

(b) Coordinate uncontaminated feed sources for dairy cattle, other livestock, and aquaculture species for the affected area within the Ingestion Exposure Pathway EPZ.

(c) Coordinates the disposal of contaminated livestock, poultry, and aquaculture species.

(d) Provide updated GIS information and files to the MEMA GIS coordinator for situational awareness program use.

(e) Coordinate an Executive Order with the Governor's office for permitting of animal movement in and out of the Restricted Area as needed.

(f) Provide guidance and supervision at personnel decontamination facilities that process household pets and service animals.

(g) Assist in the development of animal-related information to be distributed by the JIC.

(h) Serve as liaison between state response organizations and the USDA.

(7) Risk Counties.

(a) Activate and Operate Emergency Facilities and equipment.

(b) Provide assistance as Requested.

(c) Alert the Public and keep them informed.

(d) Prepare for and control evacuation.

(e) Establish Reception and Shelter Functions.

(f) Communicate and Coordinate with State on changes in status (Plant and PADs).

(8) Host Counties.

(a) Activate and Operate Emergency Facilities and equipment.

(b) Provide assistance as Requested.

(c) Alert the Public and keep them informed.

(d) Assist in traffic control as needed.

(e) Establish Reception and Shelter Functions as needed.

(f) Communicate and Coordinate with State on changes in status (Plant and PADs).

(9) Ingestion Counties (this includes the Risk and Host Counties).

(a) Activate and Operate Emergency Facilities and equipment.

(b) Provide Assistance as Requested.

(c) Alert the Public and keep them informed.

(d) Assist in traffic control as needed.

(e) Control of Agriculture and Food Supply.

(f) Communicate and Coordinate with State on changes in status (Plant and PADs).

(g) Defining the area/boundaries of the low-level contamination

(h) Implementing Protective Action Decisions protecting the food supply from contamination

(i) Restricting the movement of contaminated animals and food products (especially milk, dairy, and produce type products)

(j) Implementing Protective Action Decisions protecting the public from long-term low-level radiation exposure (relocation if needed)

(k) Decontaminating areas of critical importance (water treatment facilities, major roads/bridges, etc.)

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Annex I (Ingestion Exposure Pathway)
Appendix 1 (Ingestion County Responsibilities/Actions by Emergency Classification Level)

(this includes all counties affected to include Risk and Host)

Notification of Unusual Event (NOUE)

- ☐ No action is expected by the Ingestion Counties at this level.
- ☐ No formal notification is made to the ingestion Counties.

Alert

- ☐ The SEOC will maintain communications with the county emergency manager through the MEMA Watch Desk and/or AtHoc Notification.
- ☐ The Local EMA will notify the elected officials and local jurisdictions of the current ECL.
- ☐ The county EMA should log into WebEOC
- ☐ The county EMA should communicate any concerns about the functionality of county/city operations to the SEOC and their respective Area Coordinator.
- ☐ The county EMA should communicate any known large gatherings of people (sporting events, fairs, festivals, etc.) or emergencies that are impacting their county.
- ☐ Monitor the Alert status until verbal termination or escalation to a higher ECL level by the SEOC.
- ☐ EMAs in counties hosting Reception and Congregate Care Centers should provide support for those centers as needed; prepare for possibly standing RCCC up.

Site Area Emergency (SAE)

- ☐ Local EMA will be notified of the SAE Declaration by the SEOC.
- ☐ The SEOC will maintain communications with County EMAs through MEMA Watch Desk and/or AtHoc Notification.
- ☐ The Local EMA will notify the elected officials and local jurisdictions of the current ECL.

- ☐ The county EMA should communicate any concerns about the functionality of county/city operations to the SEOC and their respective Area Coordinator.
- ☐ The county EMA should communicate any known large gatherings of people (sporting events, fairs, festivals, etc.) or emergencies that are impacting their county.
- ☐ Monitor the Alert status until verbal termination or escalation to a higher ECL level by the SEOC.
- ☐ EMAs in counties hosting Reception and Congregate Care Centers should provide support for those centers as needed; prepare for possibly standing RCCC up.

General Emergency (GE)

- ☐ Local EMA will be notified of the GE Declaration by the SEOC.
- ☐ The Local EMA will fully activate their county EOC and maintain 24/7 staffing
- ☐ The SEOC will maintain communications with the local EMA via MEMA Watch Desk and/or AtHoc Notification.
- ☐ The county EMA should communicate any concerns about the functionality of county/city operations to the SEOC and their respective Area Coordinator.
- ☐ The county EMA should communicate any known large gatherings of people (sporting events, fairs, festivals, etc.) or emergencies that are impacting their county.
- ☐ The Local EMA will notify the elected officials and local jurisdictions of the current ECL.
- ☐ The county EMA should maintain situational awareness and route resource requests by logging into WebEOC.
- ☐ The local EMA Director (or assigned individual) should communicate any concerns through their Area Coordinator
- ☐ The county will notify the agricultural stakeholders in the county of the event.
- ☐ The county will coordinate the implementation of protective actions needs to protect the population from a possibly contaminated food supply. This would include implementing food embargos, restriction on livestock movement, and hunting and fishing restrictions.

- ☐ The local EMA Director will participate in the periodical SEOC VTC briefing (these could range from hourly to daily)

- ☐ The local EMA Director will support efforts of field sampling and monitoring teams

- ☐ The local EMA will prepare to receive Ingestion Brochures and food intervention information from the SEOC to distribute to farmers, food producers, and agricultural industry groups in the county. The County will distribute the agriculture brochures.

- ☐ The local EMA PIO (or city/town PIO) will coordinate the release of public information with the SEOC Joint Information Center (JIC).

- ☐ The county EMA will coordinate the implementation of the relocation areas, restricted areas, reentry areas, as defined by the SEOC in coordination with the county.

- ☐ EMAs in counties hosting Reception and Congregate Care Centers (RCCC) should continue operations until advised to stop by the SEOC.

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Annex I (Ingestion Exposure Pathway)
Appendix 2 (County Support of the Establishment and Maintenance of Restricted Zones)

Restricted zones are established to protect people from chronic exposure to low-level radiation. Access must be controlled to these areas where the population has been evacuated or relocated. Access control will be carried out at 19 Traffic Control Points by several State and local agencies. The SEOC will advise when and where to set up the Traffic Control Points.

- ☐ The County EMA director and Sheriff will coordinate with the SEOC on the staffing of TCP's around the restricted area.
- ☐ The County EMA will coordinate procedures for allowing re-entry into the restricted area with SEOC. Re-entry into the restricted zone is initially limited to essential and emergency personnel only.
- ☐ The County EMA will work closely with MEMA and MSDH to register, give emergency worker briefings, distribute dosimetry, distribute KI (if the State Health Officer advises), and provide escorts to the individuals entering the restricted zone.

IMPORTANT NOTE: Any person entering the restricted zone will be considered a temporary EMERGENCY WORKER. As such, they will be provided dosimetry and given "just-in-time training".

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Annex I (Ingestion Exposure Pathway)
Appendix 3 (County Support of the Establishment of Relocation Areas outside of the EPZ as requested by MEMA/SEOC)

The initial post-plume priority is to determine if there is contamination in areas outside of the evacuation areas that require additional measures to protect the public from long-term exposure to low-level radioactive material. Relocation is defined as the removal or continued exclusion of people from contaminated areas as needed to avoid ill effects of radiation. Relocation from this area is indicted when soil samples exceed EPA protective action guidelines for 1st year, 2ncd year, and subsequent years.

Relocation can take place over a period, normally a few days.

- ☐ The County EMA will coordinate with the SEOC when notified that relocation is required
- ☐ The County EMA and Sheriff will coordinate with MS Highway Patrol, MEMA, and the JIC to define an area for relocation that is easily understandable to the public and enforceable.
- ☐ The County EMA Director will coordinate with the MS Highway patrol, MDOT, and County Sheriff on how traffic and access and control points will be set up and staffed to facilitate the relocation and maintain security to restrict entry to the relocated area.
- ☐ The County EMA will identify if any hospital, elder care facilities, and any other special care facilities that require additional support during relocation, including transportation.
- ☐ The County EMA will identify any critical infrastructure located within the relocation area. (power, water treatment, transportation, food processors, etc.)
- ☐ The County EMA will coordinate with the SEOC to provide notification to people in areas identified for relocation.

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Annex I (Ingestion Exposure Pathway)
Appendix 4 (County Support of the Establishment of Reentry into the Restricted Zones)

Reentry is the approved, temporary access into a restricted zone for an essential purpose. The State Governors Authorized Representative (GAR), has the primary responsibility for coordinating and implementing all reentry programs with the counties, prioritizing, and approving re-entry requests. Priority activities include life safety, incident stabilization, maintenance of critical infrastructure and services, and animal care.

- ☐ The SEOC will determine and establish guidelines for time, including transit time that an individual could remain in a restricted zone and not exceeded their dose limits

- ☐ The County EMA will coordinate re-entry protocols with the SEOC

- ☐ The County EMA will coordinate and prioritize requests for re-entry

- ☐ The County EMA will distribute and process re-entry request forms (if required).

- ☐ The County EOC will establish/coordinate the re-entry points into and out of the restricted area with the SEOC. The County EOC will determine what will be allowed for transport in and out of this area (e.g., personal vehicles or county provided shuttles). The more equipment and vehicles that enter the restricted area, the more monitoring and potential decontamination will be required upon the exit of the restricted area.

- ☐ Each County PIO will coordinate with the SEOC PIOs to develop public messaging for reentry

- ☐ If counties choose to conduct individual reentry protocols, each County will coordinate registration, radiation exposure briefings, distribution of dosimetry, KI, and entry escorts for persons entering the restricted area. Individuals approved for re-entry are designated as emergency workers temporarily. As such they must be provided radiological briefings, just-in-time radiological training, dosimetry, and basic personal protective equipment (PPE) as needed.

- ☐ If counties choose to conduct individual reentry protocols, each County will coordinate monitoring for radiological contamination and decontamination as needed for people leaving a restricted area. The County EOC will determine how monitoring and

decontamination services will be provided upon completion of re-entry. (i.e., existing Emergency Worker Decontamination Centers or set up of an ad hoc facility).

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Annex I (Ingestion Exposure Pathway)
Appendix 5 (County Support of the Establishment of Return Areas)

This is the orderly return of people and reoccupation of areas cleared for unrestricted residence or use by previously evacuated or relocated populations. These areas no longer have contamination or there are no long-term exposure health risks from very low-level contamination.

- ☐ The county EMA will coordinate the verification and establishment of the Return area boundaries in coordination with the SEOC.
- ☐ The County Sheriff will aid the MS Highway in the removal of the Traffic control and Access points (in coordination with the SEOC).
- ☐ The County EMA Director will coordinate the timing of the return with MEMA-SEOC.
- ☐ The Local EMA will coordinate communications for people returning that it is safe to live there but some areas will still have low-level contamination that may require some ingestion [pathway food controls or restrictions.

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Annex I (Ingestion Exposure Pathway)
Appendix 6 Establishment of Food Control Measures)

Food interventions within the Ingestion Counties begin with the issuing of an embargo order from the state when aerial assessment or field sampling indicates low-level contamination is outside the evacuation areas. An embargo is defined as a restriction on the commercial movement of all agricultural products (food, feed, livestock, aquaculture, and poultry) into, out of, or through an affected area.

An embargo of agricultural products may affect producers, processors, retailers, shippers, and carriers.

It may not be practical to erect roadblocks around the entire affected 50-mile ingestion pathway zone due to the insurmountable requirements of manpower and equipment. All producers, processors, retailers, shippers, and carriers will be informed through new releases and/or personal contact by applicable state agencies of the embargo and associated compliance requirements. Roadblock/checkpoints may be established on major transportation routes.

Exactly what products are to be embargoed will be determined by the Intermediate Phase Task Force through the SEOC based on factors including, but not limited to, the season, present and projected weather conditions, and the plume and projected plume direction.

☐ The County EMA will coordinate:

- with the SEOC on the implementation of embargoed areas.
- with the SEOC on implementing restrictions on the movement and consumption of livestock and food products in the embargoed areas.
- information sharing between the state and county agriculture, farmers and producers, and industry groups
- with MDAC at the SEOC on required actions for embargo enforcement. Enforcement of the embargo will be conducted through communication with producers, processors, and industry groups. Shipments of agricultural products, with tracking and manifest requirements, will not be accepted at facilities if they have come from within the embargoed area. Some checkpoints may be established locally to support these efforts.

- hunting and fishing restrictions, along with any limited or no consumption recommendations established inside the affected area by the MS Dept. of Wildlife and Fisheries (MDWFP) in the SEOC.

☐ The County EMA and County Sheriff will identify areas where trucks can be held when an embargo is issued.

☐ County EMA Public Information Officer (PIO) will coordinate public information with the SEOC Joint Information Center (JIC)

☐ The County EMA will establish communication with county agriculture subject matter experts and establish communication networks between the county, state, and local area farmers, producers, processors, and the local agricultural groups.

☐ Milk is the initial focus of agricultural sampling and analysis. Most crops can remain standing in the field, whereas a high volume of milk is produced daily with a relatively short time to market. MSDH-BOEH will coordinate with producers regarding actions to take like holding or dumping of milk.

☐ If part of your county is under an embargo, the County EM Director will contact the State Dept. of Agriculture to coordinate on issues regarding feed shipments to maintain livestock inside the embargoed area.

☐ The County Emergency Manager Director will request county public health representation in your EOC, playing an active role in identifying issues and public concerns. County Public Health should also share with and request information from the SEOC, and available health networks.

☐ The County EMA Director will communicate any suspected cases of fraud to the SEOC as well as any rumors for the SEOC Joint Information Center (JIC) to address directly in public messaging.

☐ County Emergency Manager will report to the SEOC any citizen concerns and consumer feedback from your county.

☐ The local EMA will relay agricultural reimbursement and compensation questions from farmers, producers, and processors to the SEOC.

ANNEX J (Emergency Public Information)

1. PURPOSE. To provide guidance for informing the public of a radiological incident and to prescribe procedures for the rapid dissemination of information to the public.

2. MISSION.

a. Grand Gulf Nuclear Station. This annex establishes the procedures for emergency public information, community relations, rumor control, and government liaison that are to be used by personnel of the state of Mississippi in responding to an incident at GGNS in Claiborne County, Mississippi. This annex is not intended to address the public information needs of the operator of the plant, Entergy Operations, Inc., and other entities. It is intended to complement the procedures of Entergy Operations, Inc., Port Gibson and Claiborne County, the State of Louisiana, and Tensas Parish and mesh with their needs to accomplish the overall goal of the emergency public information program - the effective distribution of vital information to the affected populace in the most efficient possible manner.

b. River Bend Station. This annex additionally establishes the procedures for emergency public information to be used by personnel of the State of Mississippi in responding to an incident at RBS in West Feliciana Parish, Louisiana. This annex is not intended to address the public information needs of the operator of the plant, Entergy Operations Inc., and other entities. It is intended to complement the procedures of Entergy Operations Inc. and the Mississippi counties within the RBS 50 Mile EPZ, and mesh with their needs to accomplish the overall goal of the emergency public information program - the effective distribution of vital information to the affected populace in the most efficient possible manner.

3. CONCEPT OF OPERATIONS.

a. Non-Emergency.

(1) Local governments that are subject to the effects of possible radiological accidents at a fixed nuclear facility will conduct information programs to educate their citizens concerning:

(a) The nature of the radiation hazard.

(b) Procedures for notification of a radiological emergency.

(c) Evacuation routes and assembly points.

(d) Other protective measures including sheltering and the use of thyroid blocking agents and respiratory protection.

(2) The state will assist local governments in their radiological information programs as requested. These actions will be coordinated by the Mississippi Emergency Management Agency. This includes an annual calendar addressing the protective measures, mechanisms for transient population, those with access and functional needs, and translation for non-English speaking populations. Periodically the state provides Farming, Food Processing, and Food Distributor radiological information directly to the persons affected in the 50-mile Ingestion Pathway Emergency Planning Zone.

(3) The local radiological emergency plans describe the method(s) used for periodically disseminating information to the public, both residential and transient, regarding notification, warning, and appropriate protective actions. The FNF operator is responsible for making public information literature available that informs citizens of actions they should take in the event of an emergency. The local government is responsible for the distribution of this material to the residents who live within the plume exposure pathway. This program will be conducted at least annually.

(4) Annually GGNS Emergency Preparedness staff contacts the various news media outlets to provide points of contact for public information in an emergency and to discuss radiological emergency planning in general. This contact consists of verbal or media orientated informational mail-outs. Additionally, information pertaining to basic radiation, contact information, protective measures (evacuation routes, reception centers, sheltering, respiratory protection, and radioprotective drugs/Potassium Iodide), and access and functional needs information is disseminated via a Grand Gulf Emergency Preparedness Public Information website and postcard mailed annually to residents of the 10-mile EPZ. This program addresses providing information to the transient population. The Public Education and Information Program annually ensures the permanent and transient adult population within the plume exposure EPZ are provided an adequate opportunity to become aware of the above information.

b. Radiological Emergency.

(1) Local Government. The local government is responsible for initial and follow-up information activities by informing the public in the area, which a radiological emergency affects, of the emergency and protective actions to be taken. Pre-scripted news release formats should be used to facilitate timely and accurate dissemination of the emergency information through the media. These news releases should contain the following information:

(a) Areas to be evacuated.

(b) Evacuation routes.

(c) Location of reception centers.

(d) Personal protection measures.

(e) Securing of homes before evacuation.

(f) Stand-by alert for those people outside the area affected by the radiological emergency.

(g) Protective actions concerning livestock.

(h) Coordination of statements and other public information matters with Port Gibson/Claiborne County Civil Defense, MEMA, Louisiana, Tensas Parish Office of Emergency Preparedness, and Entergy Operations, Inc.

(2) State.

(a) In the event of an incident at GGNS, the public information effort undertaken by the state of Mississippi will include:

- Activation of the state joint information system and the subsequent distribution of pertinent information through the news media and other outlets.

- Activation of the Joint Information Center located at #1 MEMA Dr., Pearl, MS 39208. The backup location will be determined by the executive director MEMA/ designee.

- Activation of the Emergency Alert System in the event of a General Emergency.

- Activation of the Public Inquiries System to field questions from the public (See Appendix 1).

- Coordination of statements and other public information matters with Port Gibson/Claiborne County Civil Defense, Louisiana, Tensas Parish Office of Emergency Preparedness, and Entergy Operations, Inc.

- All State efforts will be coordinated with the Utility Company Spokesperson to generate a unified message to the media.

Note: The MEMA External Affairs (EA) Office coordinated all Public Information utilizing the MEMA EA GGNS SOG for Emergency Public Information (EPI) which contains a detailed listing of the staff involved in the emergency public information program and their duties and responsibilities.

(b) In the event of an incident at RBS, the public information effort undertaken by the State of Mississippi will include:

- Activation of the State joint information system and subsequent distribution of pertinent information through the news media.

- Presence of a State spokesperson at the RBS Joint Information in West Feliciana Parish, Louisiana.

- Coordination of statements and other public information matters with the Mississippi counties within the RBS 50 Mile EPZ and Entergy Operations, Inc.

Note: MEMA External Affairs (EA) Grand Gulf Nuclear Station (GGNS) Standard Operating Guidance (SOG), August 2020, contains a detailed listing of the staff involved in the emergency public information program and their duties and responsibilities.

c. Organization.

(1) Grand Gulf Nuclear Station (GGNS).

(a) Public Information. Example news releases are contained in the EA GGNS SOG, August 2020.

(b) Public Inquiries System. The public inquiries system is designed to accept calls from the public and answer questions on the status of the incident. This system may be activated as early as NOUE if public inquiries are of sufficient quantities. Otherwise, it will be activated at such a time that the public information officer deems necessary.

Note: State/Local/Utility Rumor Control (Public Inquiries) is consolidated in the Emergency Information Center at the JIC in Pearl, MS. The State PIO at the JIC provides a resource person to answer questions from the EIC staff pertaining to the state and local. The State PIO will respond or will refer the question(s) to the appropriate State Public Inquiries staff at the SEOC for response. The correct response will then be provided to the EIC for future use.

(c) Governmental Operations. Governmental Operations is designed to notify and

update key public officials, as well as government agencies at the local, state, and federal level and others who have an interest in the incident. This system may be activated as early as NOUE if necessary, otherwise it will be activated at such time that the public information officer deems necessary.

(2) River Bend Station (RBS). Public Information. Example news releases are contained in the MEMA EA GGNS SOG.

*Both the GGNS and RBS Emergency Public Information Standard Operating Guidelines are on file at MEMA.

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Annex J (Emergency Public Information)
Appendix 1 (GGNS Rumor Control Flowchart)

PUBLIC INQUIRIES
1-800-499-2203

STATE/PUBLIC INQUIRIES (SEOC)

1-866-519-6362

1-800-499-2203

↕

JOINT INFORMATION CENTER (JIC)
Utility Spokesperson
MEMA PIO
MSDH/DRH PIO
Claiborne County PIO
Tensas Parish PIO
LHLS/EP PIO
LDEQ PIO
Note: HAB Event, FBI PIO

Provides JIC Answers to Questions

NEWS RELEASE

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Annex K (Training)

1. PURPOSE. To outline the ongoing radiological emergency response training programs designed to complement the radiological training provided by fixed nuclear facilities.

2. CONCEPT OF OPERATIONS.

a. General. Training for response personnel is designed to enhance comprehension of radiological emergency response plans and to orient personnel to their specific response functions concerning the overall protective actions.

b. Responsibilities.

(1) State.

(a) Mississippi Emergency Management Agency. Coordinates with the MSDH/DRH to provide for the training of personnel who implement the Mississippi Radiological Emergency Preparedness Plan. The REP Training Coordinator initiates and coordinates an ongoing training program in support of this plan and carries out this responsibility in coordination with the REP Program Manager.

(b) Mississippi State Department of Health/Division of Radiological Health. Supports the development of and conducts radiological response training and provides technical guidance and assistance. MSDH/DRH Trains the RERT personnel including the support members. MEMA and MSDH/DRH support each other's training activities.

(c) Other State Agencies. Agencies with assigned duties under the basic plan participate and/or assist in training sessions as appropriate.

(2) Local Government.

(a) Local government is responsible for assuring that personnel who are assigned to response organizations with an emergency worker designation are scheduled to attend training.

(b) Locals are responsible for coordinating their training for both initial and refresher basic radiological monitoring courses. This will involve scheduling training sessions with the MEMA REP Training Coordinator.

(3) Utility.

(a) GGNS provides training for hospital staff in support of the Mississippi Radiological Emergency Preparedness Plan. GGNS also provides support training for transportation personnel in support of this plan.

(b) RBS provides training for affected Louisiana parishes. MEMA has the responsibility to provide training for those counties affected by RBS within Mississippi. This will primarily consist of REP basic and ingestion pathway type courses.

Annex K (Training)
Appendix 1 (List of Available Training)

1. FEDERAL LEVEL.

a. The following training is delivered through the Emergency Management Institute, National Emergency Training Center in Emmitsburg, Maryland.

(1) REP Exercise Evaluator Course (REEC) (PER-314).

(2) REP Planning Core Concepts Course (RPCC) (AWR-352).

(3) Radiological Accident Assessment Concepts (RAAC) (PER-316).

(4) Radiological Emergency Management (IS-3).

(5) Radiological Emergency Response (IS-301).

(6) Introduction to Radiological Emergency Preparedness (REP) Exercise Evaluation (IS-331).

b. The following training is delivered through the Center for Domestic Preparedness in Anniston, Alabama.

(1) Radiological Emergency Response Operations (RERO) (PER-904).

(2) Advanced Radiation Incident Operations (ARIO) (PER-905).

(3) Radiological Series, Train the Trainer (RAD TtT) (PER-908-1).

c. The following training is delivered through the U.S. Department of Energy, Office of Environmental Management

DOE Modular Emergency Response Radiological Transportation Training (MERRTT) Train- the-Trainer (TtT).

2. STATE LEVEL. Training offered by the Mississippi Emergency Management Agency.

a. Fundamentals Course for Radiological Response (FCRR-2).

b. DOE Modular Emergency Response Radiological Transportation Training (MERRTT).

c. Refresher Course for Radiological Response (MS-330).

d. Pre-Hospital and Patient Transportation Training (MS-746).

e. Traffic Control and Access Control Point Training.

f. Reception Center Radiological Monitoring and Decontamination Course (MS-753).

g. Bus Driver Dosimetry Course (MS-761).

h. Emergency Worker Decontamination (MS-762).

i. Hospital Emergency Department Management of Radiation Accidents (HRA-2).

Annex K (Training)
Appendix 2 (Detailed Course Description)

1. FEDERAL LEVEL.

a. REP Exercise Evaluator Course (REEC) (PER-314).

(1) This regionally delivered course is designed for evaluators of nuclear power plant off-site exercises. Course topics include regulations and guidelines for evaluating REP exercises, in preparation of, observations during, post-exercise activities, and techniques for exercise evaluation. This course fulfills the credentialing training requirements for becoming a Type III REP Exercise Evaluator.

(2) AWR-317 REP Core Concepts Course (RCCC), MGT-445 REP Plan Review Course (RPPR) OR AWR-352 REP Planning Core Concepts Course (RPCC) and IS-331 Introduction to Radiological Emergency Preparedness (REP Exercise Evaluation).

b. REP Planning Core Concepts Course (RPCC) (AWR-352).

(1) This course will assist Federal, State, tribal, and local emergency managers more effectively meet the planning challenges presented to the emergency responder community during a radiological incident at an NRC-licensed commercial nuclear power plant. This awareness-level 0.5-day course will focus specifically and be limited to the introduction of the existing REP planning methodology. This methodology goes beyond the planning guidance provided in Comprehensive Preparedness Guide -101 and incorporates the unique preparedness aspects of FEMA's REP Program.

(2) Prerequisites – IS-3 Radiological Emergency Management; AWR-317 REP Core Concepts Course (RCCC).

c. Radiological Accident Assessment Concepts (RAAC) (E/L341).

(1) This course addresses the radiological consequences of accidents involving radiological materials. This includes accidents or incidents involving power reactors, lost sources, dispersion devices, and transportation. The focus of the course is the concepts involved in formulating protective action recommendations following a radiological accident. Participants engage in problem-solving sessions and a tabletop exercise. **There are two required evening sessions and a final examination in this course.** Enrollment is limited to local, State, and Federal technical radiological accident assessment staff. The private sector (i.e., utility company) technical staff also may apply. **This course is not intended for emergency management staff.**

(2) Prerequisite – Completion of the pre-course workbook is required before attending the course.

(3) Recommendation: IS-301 Radiological Emergency Response.

d. Radiological Emergency Management (IS-3).

(1) This independent study course contains information on a variety of radiological topics, including fundamental principles of radiation; nuclear threat and protective measures; nuclear power plants; radiological transportation accidents, and other radiological hazards.

(2) Prerequisite – None.

e. Radiological Emergency Response (IS-301).

(1) The goal of this independent study course is to provide a learning experience in which participants demonstrate a comprehensive understanding of radiological protection and response principles, guidelines, and regulations to prepare them for the operations course (RERO).

(2) Prerequisite – None.

f. Introduction to Radiological Emergency Preparedness (REP) Exercise Evaluation (IS-331).

(1) This course introduces the student to the basic concepts and terminology of the offsite emergency preparedness program for commercial nuclear power plants. It introduces the program's exercise evaluation regulations, philosophy, and methodology.

(2) Prerequisites – None.

g. Radiological Emergency Response Operations (RERO) (PER-904) (CDP course).

(1) Radiological Emergency Response Operations is a 5-day course offering lectures, hands-on training, and team exercises. The lectures include operational-level radiological concepts using guidance and information from the U.S. Department of Homeland Security, Federal Emergency Management Agency, U.S. Nuclear Regulatory Commission, U.S. Department of Energy, and the Environmental Protection Agency. The use of the hands-on training modules will provide students with the knowledge and skills to perform in a radiological emergency response operation. The Radiological Emergency Response Operations course culminates on the fifth day

with a final exercise involving the emergency response operations skills and training learned during the course.

(2) Prerequisites – Successful completion of AWR-160 Standardized Awareness Training; IS-700.a National Incident Management System (NIMS); IS-800.b National Response Framework; IS-100.b Introduction to the Incident Command System; IS-200.b Incident Command System for Single Resources and Initial Action Incidents; IS-3 Radiological Emergency Management or FCRR-2 Fundamentals Course for Radiological Response, and Meet the requirements and standards of Hazardous Waste Operations and Emergency Response (HAZWOPER), 29 C.F.R. § 1910.120(q)(6)(ii), (2009) and/or National Fire Protection Association (NFPA) 472 Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, Chapters 5 and 6, and 7.

h. Advanced Radiation Incident Operations (ARIO) (PER-905) (CDP course).

(1) ARIO is a five-day course offering lectures, hands-on training, and practical exercises. The lectures include radiological concepts, agencies and regulations, National Incident Management System (NIMS) and the Incident Command System (ICS), and instrumentation selection. Hands-on training modules provide the student with the knowledge and skills to perform a radiological emergency response operation. ARIO culminates with an extended practical exercise that utilizes the emergency response skills and training learned during the course.

(2) Prerequisites – Successful completion of PER-904 Radiological Emergency Response Operations (RERO) or PER-241 WMD Radiological/Nuclear Course for HazMat Technicians or PER-240 WMD Radiological/Nuclear Responder Operations Course; IS-700.a National Incident Management System (NIMS); IS-100.b Introduction to the Incident Command System; IS-200.b Incident Command System for Single Resources and Initial Action

i. DOE Modular Emergency Response Radiological Transportation Training (MERRTT) Train- the- Trainer (TtT).

(1) A part of the Transportation Emergency Preparedness Program (TEPP), MERRT provides fundamental knowledge for responding to transportation incidents involving radioactive material and builds on training in existing hazardous materials curricula. The material is designed to meet the training need of persons serving in fire service, law enforcement, emergency medical service, public works, or on a hazardous materials team. Once trained as a trainer, a person can then go back to his/her jurisdiction and train other responders in this program.

(2) Prerequisite - Completion of MERRTT Course and validation of instructor status with a sponsoring agency.

2. STATE/LOCAL LEVEL.

a. DOE Modular Emergency Response Radiological Transportation Training (MERRTT).

(1) Developed by the U. S. Department of Energy, MERRTT is a nationwide program to ensure training consistency in responding to incidents involving radiological materials. MERRTT exclusively covers Hazards Class & radioactive materials and builds on information received in other hazardous material courses. MERRTT courses range from an overview of the radioactive material and response issues to the more complex topics of radiological instrumentation and offensive actions used at radioactive material incidents.

(2) Prerequisite – None.

b. Refresher Course for Radiological Response (MS-330).

(1) This course provides previously trained radiological monitors with a review of principles of radiation, its effects, proper first response procedures to follow in a peacetime radiological emergency, and basic protective actions for radiological defense. A review of radiological instrumentation and proper monitoring techniques is included.

(2) Prerequisite – FCRR-2 Fundamentals Course for Radiological Response.

c. Pre-Hospital and Patient Transportation Training (MS-746).

(1) This course is designed for local response personnel who transport radiologically contaminated injured individuals to the hospital. The course includes an overview of radiation and the use of specific radiation detection instruments. The main focus, however, is on avoiding the spread of contamination while handling and transferring the patient.

(2) Prerequisite – FCRR-2 Fundamentals Course for Radiological Response.

d. Traffic Control/Access Control Point Training.

(1) This course is designed for State/local response personnel from agencies with traffic/access control responsibilities. This course presents a brief overview of radiation basics and instrumentation as well as training in using the SOPs and checklists from the State/local REP plans.

(2) Prerequisite – FCRR-2 Fundamentals Course for Radiological Response.

e. Reception Center Radiological Monitoring and Decontamination Course (MS-753).

(1) This course is designed for State/local response personnel from agencies with monitoring and decontamination responsibilities. This course presents a brief overview of radiation basics and instrumentation, as well as monitoring and decontamination procedures. The course covers personnel monitoring, decontamination, and vehicle monitoring and decontamination. This course contains an exercise and test, which must be satisfactorily completed for State Certification to perform these tasks.

(2) Prerequisite – FCRR-2 Fundamentals Course for Radiological Response.

f. Bus Driver Dosimetry Course (MS-761).

(1) This course is designed for school personnel responsible for transportation during a radiological emergency at a fixed nuclear facility. The course focuses on the use of dosimetry and county SOPs and checklists.

(2) Prerequisite – None

g. Emergency Worker Decontamination (MS-762).

(1) This course is designed for State/local response personnel from agencies with monitoring and decontamination responsibilities for Emergency Responders within the 10-mile EPZ. This course presents a brief overview of radiation basics and instrumentation, as well as monitoring and decontamination procedures. The course covers personnel monitoring, decontamination, and vehicle monitoring and decontamination.

(2) Prerequisite – FCRR-2 Fundamentals Course for Radiological Response.

h. Hospital Emergency Department Management of Radiation Accidents (HRA-2). The course provides the participants with an overview of radiation and its effects on humans, the knowledge and skills on how to prepare to receive patients involved in radiological incidents, care of patients involved in radiological incidents, and the opportunity to participate in a simulation that involves hands-on assessment and treatment of victims injured in a radiological incident.

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Annex K (Training)
Appendix 3 (Instructor Qualifications)

1. OVERVIEW. Radiological Instructors in categories I and III should be proficient in course content, methodology, and instructional techniques. Requirements exist for those personnel in all instructor categories who have other duties not related to the instruction of radiological courses, or who have not had the opportunity to instruct for extended periods.

2. QUALIFICATION CRITERIA.

a. Radiological Instructor I.

(1) To qualify as an Instructor, I individuals must attend the following:

(a) Fundamentals Course for Radiological Response (FCRR-2).

(b) DOE Modular Emergency Radiological Response Transportation Training (MERRTT) Train-the-Trainer.

(c) Radiological Series, Train the Trainer (RAD TtT).

(d) An adult education methods course.

(2) To remain qualified as an Instructor I, an individual must have conducted a minimum of two FCRR-2 courses within two years.

(3) After two years from attaining Instructor I status, if the individual has not completed the above requirements, he/she will be considered unqualified to instruct in the FCRR-2.

(4) To re-qualify as an Instructor I, individuals must attend the following:

(a) Refresher Course for Radiological Response (RCRR).

(b) DOE Modular Emergency Radiological Response Transportation Training (MERRTT) Train-the-Trainer (TtT).

b. Radiological Instructor III.

(1) To qualify as Instructor III an individual must attend the required courses for Radiological Instructor I and the Radiological Series Train-the-Trainer (TtT) for Radiological Instructors at the Center for Domestic Preparedness in Anniston, AL.

(2) To remain qualified as an Instructor III, an individual must have completed a minimum of 30 hours of instruction, to be distributed within the FCRR, MERRTT, and the Hospital Emergency Department Management of Radiation Accidents (HRA-2) courses within two years.

(3) To re-qualify as an Instructor III, an individual must attend as a minimum the courses listed under II. A. 4.

c. Radiological Instructor/Field Professional.

(1) MEMA recognizes the instructional qualifications of professionals in the radiological field in their area of expertise.

(2) This includes, but is not limited to, professionals in the area of Radiological Health, fixed nuclear facilities, nuclear science, and related field and industries. Responders who have been certified as instructors through the Office of Domestic Preparedness radiological awareness programs are included in this list of professionals.

Annex L (Drills and Exercises)

1. PURPOSE.

a. To provide necessary guidance in the development, conduct, and evaluation of emergency drills and exercises. Emergency drills and exercises are required by Federal Regulations to test the planning, procedures, and training of utilities, and state and local emergency response activities. The National Preparedness System (NPS) outlines an organized process for the whole community to move forward with their preparedness activities and achieve the National Preparedness Goal, which organizes actions to plan, organize, equip, train, and exercise the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats and hazards that pose the greatest risk to the security of the nation.

b. To properly prepared OROs for an FNF incident one must consider the six parts of the NPS: (1) Identifying and Assessing Risk; (2) Estimating Capability Requirements; (3) Building and Sustaining Capabilities; (4) Planning to Deliver Capabilities; (5) Validating Capabilities; and (6) Reviewing and Updating Preparedness Efforts.

2. CONCEPT OF OPERATIONS. Drills and exercises are conducted to test the adequacy of coordination and content of radiological emergency preparedness plans and the procedures established in support of these plans. These drills and exercises include selected mobilization of state and local personnel and resources adequate to verify the capability of responding to an emergency requiring an offsite response.

a. Exercises.

(1) State and local governments will participate in a full-scale exercise at least every two years in conjunction with GGNS. The State participates in exercises, as required, to support RBS in the ingestion pathway response; on the average of once every eight years.

(2) Exercise scenarios are varied so that all major plan elements are tested within eight years (Table L-1). Designated representatives from federal, state, and county governments observe and critique full-scale exercises. A critique is conducted at the conclusion of each exercise or drill to report on the quality of the actual response as compared to the planned response. FEMA prepares a formal evaluation report and submits this to MEMA who uses the report as a foundation for a review, refinement, and revision of the state and local Radiological Emergency Preparedness Plans.

(3) Due to the impact on ORO resources, the licensee and appropriate OROs must agree on the use of the "no/minimal release" option as part of the overall scenario development process. If OROs elect to participate in a joint exercise with a no/minimal radiological release scenario,

part of the planning for the exercise will include identifying capabilities and other activities/processes that may not be evaluated under such a scenario and determining appropriate alternative demonstration and evaluation venues so that the OROs have appropriate opportunities to meet their assessment requirements. Planners may not use a "no/minimal release" scenario in consecutive exercises.

(4) Alternative venues could include controller injects during the exercise to drive demonstration of specific response elements; other assessment activities connected to the exercise; or additional activities during the assessment cycle. For example, controller injects or mini-scenarios could drive demonstration of dose projection; decisions to decontaminate people and equipment; emergency worker understanding and use of established turn back values; and field monitoring. Also, creative scenario elements could be used to drive a demonstration of protective action decision-making (e.g., evacuation, sheltering in place, etc.).

b. Drills.

(1) Drills are supervised instructional periods aimed at testing, developing, and maintaining skills in a particular operation. A drill is often a component of an exercise or conducted as a remedial activity to demonstrate skills and knowledge that were not adequately demonstrated as scheduled in a full-scale exercise.

(2) Drills include:

(a) Communications drills that are conducted to test both the adequacy of communications links and the response agency's understanding of emergency action levels and message content.

1. Communications between each facility and state and county government within the Plume Exposure Pathway are tested monthly.

2. Communications between federal emergency response organizations and states are tested quarterly.

3. Communications between each facility, state, and county EOCs and field assessment teams, are tested annually.

(b) Radiological monitoring drills are conducted annually. These drills include the collection and analysis of all sample media, such as water, vegetation, soil and air, and provision for communications and record keeping.

(c) Health physics drills are conducted semi-annually in coordination with the fixed

nuclear facilities. These drills involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment. These drills involve MEMA and MSDH/DRH personnel, as appropriate.

(d) Medical drills are conducted on an annual basis to ensure the adequacy of transportation and medical care for contaminated/injured individuals from the plume exposure pathway EPZ of GGNS. These drills are conducted at the primary hospital on the year of the full-scale exercise and the backup hospital on the off years.

Table L-1 REP Exercise Process Frequencies:

Exercise Types	Reference	Frequency
Plume Exposure Pathway	44 CFR §§ 350.9(c)(1), (2), and (3) N.2.a	Biennially (i.e., four times in an 8-year exercise cycle)
Ingestion Exposure Pathway and Relocation, Reentry, and Return (RRR)	44 CFR 350.9(c)(4)[42] N.2.b	At least once every 8 years (i.e., once in an 8-year exercise cycle) FEMA recommends demonstrating ingestion exposure pathway, relocation, reentry, and return activities within the same exercise when possible because of the similar scenario needs of exercise play

Exercise Scenario Elements	Reference	Frequency
HAB	N.3.a	Each 8-year exercise cycle (i.e., once in an 8-year exercise cycle) Can be combined with other scenario elements, though cannot be combined with No/Minimal Release of Radioactive Materials scenario element in consecutive 8-year exercise cycles
Rapid Escalation	N.3.b	Each 8-year exercise cycle (i.e., once in an 8-year exercise cycle) Can be combined with other scenario elements
No/Minimal Release of Radioactive Materials	N.3.c	Use is recommended but not required If used should only be once in an 8-year exercise cycle Can be combined with other scenario elements, though cannot be combined with HAB scenario element in consecutive 8-year exercise cycles
Resource Integration	N.3.d	Each 8-year exercise cycle (i.e., once in an 8-year exercise cycle) Can be combined with other scenario elements

Drills	Reference	Frequency
Medical Services	N.4.b	Annually Evaluated by FEMA biennially Can be conducted in conjunction with biennial exercise
Laboratory	N.4.c	Biennially at each laboratory designed in the emergency plan Each laboratory is only evaluated once every 8-year exercise cycle
Environmental Monitoring	N.4.d	Annually Can be conducted in conjunction with biennial exercise
Ingestion Pathway and Post-Plume Phase	N.4.e	Biennially Can be conducted in conjunction with biennial exercise All organizations with roles/responsibilities will participate in at least one drill during each 8-year exercise cycle
Communications	N.4.f	Monthly between organizations with roles/responsibilities within the plume exposure pathway EPZ Quarterly between organizations with roles/responsibilities within the ingestion exposure pathway EPZ

c. Responsibilities.

(1) Mississippi Emergency Management Agency.

(a) Coordinates exercise scheduling and participation with the state agencies for GGNS and RBS.

(b) Coordinates with the MSDH/DRH and each fixed nuclear facility, the scheduling, and development of, and preparation for, exercises and drills for each fixed nuclear facility within or affecting the State.

(2) Mississippi State Department of Health/Division of Radiological Health.

(a) Provides technical assistance in developing and conducting exercises and drills.

(b) Ensures that the required radiological monitoring and health physics drills are conducted and that subsequent evaluations are made.

(3) Other State Agencies. Agencies with assigned responsibilities and duties under the Mississippi Radiological Emergency Preparedness Plan participate in drills and exercises as appropriate.

d. Tasks. The following are the major tasks in the development, conduct, and evaluation of an exercise. The listing also provides the recommended time before the exercise that the task be completed.

Major Tasks	Time (no later than x days before Exercise) *
Establish Exercise date	365 days
Establish Objectives and General Extent of Play	90 days
Develop Scenario	60 days
Logistics Arranged	30 days
Establish Controller Organization	30 days
Develop Detailed Player Organization	30 days
Arrange Support	30 days
Prepare Controller/ Evaluator Briefing	21 days

The estimated times above are for a relatively large-scale exercise and represent the absolute maximum time allotted.

NOTE: ABSOLUTE DEADLINES TO MEET ARE:

State and utility must jointly develop and submit exercise objectives to FEMA and NRC Regional offices not later than 90 days to the scheduled date of the exercise.

State and utility must develop and submit the exercise scenario to FEMA and NRC Regional offices not later than 60 days before the scheduled date of the exercise.

e. Detailed Tasks.

(1) Exercise Planning Timelines. Exercise planning timelines establish target timeframes for attaining significant, exercise-related milestones, such as planning conferences, training, exercise conduct, after-action reporting, and improvement planning. These timelines should be consistent with the scheduling component of the entity's Multi-Year Training and Exercise Plan.

The Training Calendar for MS Office of Homeland Security (MSOHS) & MEMA can be found at the following website: http://www.homelandsecurity.ms.gov/calendar.html. The calendar is an interactive, multi-year calendar that allows the user to view scheduled training and exercises one month at a time.

(2) Capabilities, Tasks, and Objectives.

(a) Exercise capabilities, tasks, and objectives are the cornerstone of design and development. The exercise planning team must consider all of the capabilities being evaluated. Each capability has specific tasks associated with it that should be performed and validated during the exercise.

(b) Capabilities and tasks, derived from the Target Capabilities List (TCL) and Universal Task List (UTL), should be used to formulate exercise objectives that reflect the exercising entity's specific needs, environment, plans, and procedures. The TCLs/UTLs are specific to individual exercises and can be located at www.hseep.dhs.gov.

- Log in to the "HSEEP Toolkit"

- Select the Exercise Evaluation Guides (EEGs) tab to view the TCL/UTL for that specific exercise.

(c) Review FEMA Interim REP Program Manual to determine those objectives that must be met to comply with the eight-year performance requirement. (See Appendix 2, Tab A)

(d) Based on the above, prepare a listing of those objectives that are to be proposed for the exercise.

(e) Schedule a meeting with the utility, FEMA, and NRC (if necessary) to initiate the development of the exercise.

(f) It is recommended that an exercise design team be established at this initial meeting. This team should have representation from the utility, the states, and the federal agencies (FEMA and the NRC). The representation needed on the team and the roles of the team members are shown in Appendix 1. At this initial meeting, determine the meeting frequency and schedule the next meeting.

(g) As the objectives are agreed upon, develop the general levels of demonstration and extent of play. Use, as a general rule of thumb, the need to demonstrate approximately one-third of the activities in each exercise to meet the eight-year full demonstration requirement. Activities that will be simulated and the extent of simulation should be carefully laid out and agreed upon

during the development of the extent of play.

(h) Prepare a document listing the exercise objectives and extent of play and obtain the concurrence of the Exercise Design Team members (See Appendix 2).

(i) Develop detailed extent-of-play worksheets as necessary.

(j) In conjunction with the utility and Louisiana, formally submit the exercise objectives to FEMA and NRC regional offices 90 days before the exercise date.

(3) Develop Scenario.

(a) Use the objectives developed from the Target Capabilities List to develop the Extent-of-Play and exercise outline. The items necessary to address in the outline are shown in Appendix 3.

(b) Coordinate with the utility regarding needed plant accident conditions to assure demonstration of the objectives.

(c) Using the extent of play and the outline, list of participants, review the Universal Task List for actions needed to be performed to accomplish the required levels of demonstrations.

(d) Identify the areas where message or data input is necessary to assure the required response by the participants.

(e) Coordinate with utility personnel regarding the radiological conditions resulting from the accident and assure they are sufficient to drive the offsite scenario.

(f) Based on the design team concurrence with the overall accident parameters, prepare the narrative summary and the general sequence of events. The sequence of events relies on the plant accident sequence.

(g) Develop the messages and data documents necessary to provide the required input to the participants.

(h) Begin development of the scenario package in accordance with the listing of scenario sections in Appendix 4.

(i) Based on FEMA and NRC review and comments on the objectives and extent of play, revise the appropriate sections of the scenario.

(j) In conjunction with the utility, prepare and submit the scenario package to FEMA and NRC, 60 days before the exercise date.

(4) Controller Organization.

(a) Prepare an organization chart assigning at least one controller to each active site. This chart will become part of the scenario package.

(b) Identify sources of controllers. They may come from nonparticipating state agencies or personnel within participating organizations as long as they are not identified as players. The utility may furnish controllers also.

(c) Prepare a listing of the controller position, the proposed individual for the position, and the telephone number for the individual. This listing will be incorporated into the scenario package.

(d) Formally request the controller support needed by sending a written request to the identified sources.

(e) Provide the necessary logistics information to those individuals obtained as controllers. The information should include the date(s) of the exercise, the times during which the exercise will occur, their controller assignment and the map or maps to the controller briefing site, and their assigned exercise location.

(f) Prepare the individual controller scenario packets. Each of these should contain the sections of the overall scenario package appropriate to the controller assignment.

(g) Prepare and conduct controller briefing to include administrative announcements and scenario changes if any, an overview of scenario events and approximate times of occurrence, participant guidelines, controller guidelines, controller checklist, evaluation material description, safety instructions, and post-exercise debriefing instructions.

(5) Players.

(a) Using the list of participating activities, determine the positions and number of individual players necessary to demonstrate the objectives per the extent of play. This will include field teams, bus drivers, EMTs, law enforcement officers staffing TCPs, personnel staffing EOCs, monitoring and decontamination station staff, reception center staff, etc.

(b) Notify each participating organization within each level of government, in writing, of the date(s), time, and required players for the exercise.

(6) Exercise Support.

(a) Determine the number of controllers and the number of scenario copies needed for submittal. Using this number ensures there are adequate copies of the scenario packet binders on hand or ordered.

(b) Determine the means of distinguishing among players, controllers, evaluators, and observers and make provision for the badges, armbands, or other methods.

(c) Access to the scenario must be restricted to the authors, the federal reviewers, the evaluators, and the controllers. Provide a secure working area and a locked container for storage.

(d) Assure that adequate transportation is available for controllers.

(e) Assure that a location has been reserved for the controller briefing and the post-exercise informal critique and public hearing.

(7) Controller/Evaluator Briefing.

(a) Determine from FEMA what it desires in the briefing and how long before the exercise date the briefing is to be held.

(b) Prepare a briefing that covers controller organization, scenario overview, action sites and participants, emergency notification system overview, communications systems and transportation systems overview, and simulation listing.

(8) Exercise Report.

(a) Obtain the completed exercise summary forms and EEGs from each controller.

(b) Review the information on the completed forms and consolidate it for each major activity. Obtain any needed information from the controller to fill out the required information.

(c) Prepare an activity summary that indicates the controller's view of the activity and whether or not there are any deficiencies, Areas Recommended for Corrective Action (ARCA), or Areas Recommended for Improvement (ARFI).

(d) Develop a written narrative of the exercise performance.

(e) Establish a schedule for accomplishing the needed corrective actions and institute a tracking system to assure their completion.

(9) Corrective Action Tracking and Implementation. Corrective actions captured in the AAR/IP should be tracked and continually reported on until completion. These efforts are part of a more comprehensive continuous improvement process that applies before, during, and after an exercise. Stakeholders should also ensure a system is in place to validate previous corrective actions that were successfully implemented. Over time, corrective actions effectively integrated back into the Integrated Preparedness Cycle will yield continuous improvements.

(10) Improvement Planning to Support Continuous Improvement. Continuous improvement is a method in which capabilities are periodically examined to make sure they are sufficient, accurate, and effective to handle the threats, hazards, and risks a jurisdiction/organization may face. Identifying strengths, areas for improvement and corrective actions that result from exercises help jurisdictions/organizations build, sustain, and deliver capabilities as part of a continuous improvement process. Continuous improvement includes:

(a) A Consistent Approach: Jurisdictions/Organizations should employ a consistent approach for continuous improvement-related activities across applicable mission areas—Prevention, Protection, Mitigation, Response, and Recovery. A consistent approach enables a shared understanding of terminology, functions, processes, and tools. The approach also fosters continuous improvement-related interoperability and collaboration across a jurisdiction's/organization's components.

(b) Supporting Preparedness: Jurisdictions/Organizations support the development and sustainment of capabilities across the whole community, which contributes to supporting preparedness. Continuous improvement activities also ensure that jurisdictions/ organizations can support assessments of preparedness in a timely, actionable, and meaningful way.

(c) Effective Issue Resolution and Information Sharing: Through Improvement Planning, jurisdictions/organizations complete continuous improvement action items at the lowest level possible, while facilitating the sharing of strengths and areas for improvement.

Annex L (Drills and Exercises)
Appendix 1 (Exercise Design Team)

1. PURPOSE. This Appendix outlines the representation recommended for the exercise design team and their respective roles.

2. CONCEPTS.

a. The exercise design team should not be composed of more than two or three people from each agency. Representatives should be appointed from:

(1) Federal.

(a) FEMA.

(b) NRC.

(2) State.

(a) Mississippi.

- MEMA.
- MSDH/DRH.

(b) Louisiana.

- GOHSEP.
- LDEQ.

(3) Utility. GGNS EP Group or RBS EP Group (onsite and offsite representation)

b. The members of the team representing the states and the utility may not be used as players during the exercise since they will have intimate knowledge of the scenario. Care should be taken to appoint members who are extremely familiar with the state and local Radiological Emergency Preparedness Plans, and whose presence as a scenario developer/controller will not adversely affect the on and offsite response organization.

c. Federal members of the team are there to provide technical expertise and guidance to the representatives from the states and the utilities. These members will also act as the liaison between the group developing the objectives and scenario and the group ultimately responsible for reviewing and approving these documents.

d. Utility personnel is there to provide utility input to the objectives and scenario such as plant parameters, radiological data, offsite support to onsite activities to be played, EOF input, and other information as needed.

e. State representatives will provide the objectives and extent of play information based on requirements derived from a review of previous exercises relative to corrective actions needed to be demonstrated and those due in the six-year cycle. These representatives will also develop the overall scenario, the mini-scenarios that support the overall scenario, and the messages that support both. Mini-scenario examples are a road impediment for a TCP or a contaminated injured drill for an ambulance company.

Annex L (Drills and Exercises)
Appendix 2 (Capabilities, Tasks, and Objectives)

1. PURPOSE. The purpose of this Appendix is to outline the organizations to be evaluated throughout the six-year cycle and those objectives from FEMA REP Program Manual that cover each response organization.

2. CONCEPTS.

a. Objectives lay out the elements of the plan that will be exercised in any given full-scale exercise conducted to satisfy the requirements of NUREG 0654/FEMA REP-1.

b. The extent of play defines the level of play expected and what may be simulated. For example, the local government may be required to deliver barricades and cones to five TCPs, but four of those may simulate setting up and only one deploys the equipment.

c. The following organizations may be considered for evaluation during the conduct of an exercise.

(1) Risk County.

(a) EOC.

(b) Monitoring/Decontamination Stations.

(c) Schools/Day Cares.

(d) Hospital/Nursing Homes.

(e) Homebound Special Needs.

(f) Traffic/Access Control.

(g) Transportation.

(h) Public Information.

(2) Host Counties.

(a) EOC.

(b) Reception Center.

(c) Monitoring/Decontamination Stations.

(d) Shelter Facilities.

(e) Public information.

(3) State.

(a) EOC.

(b) Traffic /Access Control.

(c) RERT.

(d) Ingestion Pathway Actions.

(e) Public Information.

(4) Medical Services.

(a) Ambulance Services.

(b) MS-1 Primary/Backup Hospital.

Annex L (Drills and Exercises)
Appendix 2 (Capabilities, Tasks, and Objectives)
Tab A (Target Capabilities List (Sample))

Table in Progress

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Annex L (Drills and Exercises)
Appendix 3 (Exercise Outline)

1. PURPOSE. The outline below is suggested for the Scenario Package to be used in a full-scale exercise. The format may change depending on the desires of the FEMA regional staff or adjacent state desires.

2. OUTLINE.

a. Introduction.

b. Scope and Objectives.

c. Participant Guidelines.

d. Controller Guidelines.

(1) General Instructions.

(2) Specific Instructions.

(3) Controller Checklist.

(4) Task Guides.

e. Scenario.

(1) Sequence of Events.

(2) Facility Timelines.

(3) Radiological Data.

(4) Message Summary.

(5) Messages.

f. Evaluation Material.

g. Mini-Scenarios.

h. References and Attachments.

Annex L (Drills and Exercises)
Appendix 4 (Package Development)

1. PURPOSE. This is the format suggested for the development of the drill/exercise packages as shown in Appendix 3. The contents of each section are outlined here.

2. CONCEPTS.

a. Introduction. Contains information regarding the date, time, and location of the drill/exercise, the list of participants, and the Controller organization.

b. Scope and Objectives. Contains the drill/exercise scope, the objectives to be met, and the extent of play involved in the demonstration of the objectives.

c. Player Guidelines. Contains information for the drill/exercise participants regarding the play of the drill/exercise activities. A typical set of participant guidelines is attached as Tab A.

d. Controller Guidelines. Contains information to the drill/exercise controllers necessary to effectively perform their jobs. The information may vary from brief general instructions for a limited scope drill to more detailed information needed for an exercise. A copy of controller instructions is attached as Tab B. Additional information may be included such as procedure checklists for the participant positions.

e. Scenario. This section contains five subsections, which contain the information necessary to conduct the drill/exercise. The subsections and their contents are shown below.

(1) Narrative Summary and Sequence of Events. Contains a narrative description of the drill/exercise events and a detailed listing of the sequence of the main events of the drill/exercise.

(2) Facility Timelines. Contains a timeline for each major drill/exercise facility or action site. The timeline is a graphic display of the major events and the times at which they occur.

(3) Radiological Data. Contains the radiological data appropriate to the drill/exercise. This may be in the form of tables, maps, computer printouts, or other presentations.

(4) Message Summary. Contains a listing of the scenario messages by message number, the controller responsible for delivering them, the content of the message, and the time at which it is to be delivered.

(5) Messages. Contains the messages or cue cards to be provided the players to develop the scenario or provide needed participant information.

f. Evaluation Material. Contains the forms to be used by the controllers/evaluators performing their evaluation of the drill/exercise participants' performances. These forms should be provided by FEMA.

g. Mini-Scenarios. Contains the mini-scenarios associated with specific demonstrations necessary to meet objectives. Examples of mini-scenarios are MS-1 activities associated with a drill/exercise involving a reception center or the traffic/access control point activities associated with an EPZ EOC.

h. References/Attachments. Contains any reference material and/or attachments necessary to support the scenario package.

Annex L (Drills and Exercises)
Appendix 5 (Participant Guidelines)

1. PLAYER INFORMATION.

a. Purpose. The success of the exercise is largely dependent on player performance. The appropriate reaction to simulated emergency conditions and demonstrated competence in the Emergency Plan and Procedures are the key criteria by which the players are evaluated. It is imperative, therefore, that all players' actions and activities are witnessed by an Evaluator. Any actions that are to be simulated must be brought to the attention of the Evaluator to ensure that credit is awarded. The success of the exercise is based on the demonstration of the predetermined exercise objectives.

b. Player Guidelines.

(1) Maintain a serious attitude throughout the exercise.

(2) Always maintain courtesy and professionalism.

(3) Teamwork is essential! Do your job and then help other people do theirs. For example, if you know certain information should be available, ask for it. This makes you look good and may reduce a deficiency for someone else.

(4) Think! Brainstorm and look for all possible solutions or consequences of events. Maintain the "big picture" of what is happening.

(5) Identify yourself by name and function to the Evaluator in your area. Always wear your identification badge.

(6) Elements of exercise play will be introduced through the use of controlled exercise messages and by information generated by Players as a result of a particular emergency activity performed. Therefore, be responsible for initiating actions per instructions and responsibilities.

(7) Communications should be concise and formal with the use of abbreviations minimized. Always include "**This is a drill.**"

(8) Use and demonstrate knowledge of the Emergency Plan and Procedures.

(9) No response to an exercise situation will be simulated without Controller approval.

(10) Keep a list of items, which you believe will improve the plan and/or procedures. Provide this to your Controller at the end of the Exercise.

(11) Remember, one of the main purposes of an exercise is for you to assure yourself that you are adequately prepared. Areas for improvement or lessons learned, when identified, will improve your overall emergency preparedness.

2. CONTROLLER INFORMATION.

a. Purpose.

(1) Controllers function to direct the flow of scenario events to ensure that the conduct of the exercise/drill is affected per agreed-upon objectives and extent of play provisions.

(2) Each Controller should be familiar with the following:

(a) The basic objectives of the exercise.

(b) The assumptions and precautions being taken.

(c) The exercise scenario, including the initiating events and the expected course of action to be taken.

(d) The various locations that will be involved and the specific items to be observed at those locations.

(e) The evaluation checklists provided.

b. Controller Guidelines.

(1) Controllers will position themselves at their assigned locations 30 minutes before the activation of the facility for which they have responsibility.

(2) Communications will be tested before exercise commencement. All watches and clocks will be synchronized with the Lead Exercise Controller as part of the communications testing.

(3) All Controllers will comply with instructions from the Lead Exercise Controller.

(4) Each Controller will have copies of the messages controlling the progress of the exercise scenario. No message shall be delivered out of sequence or other than as written unless specifically authorized by the Lead Exercise Controller.

(5) Controllers will not provide information to the Players regarding scenario progression or resolution of problems encountered in the course of the simulated emergency. The exercise participants are expected to obtain information through their organizations and exercise their judgment in determining response actions and resolving problems.

(6) Some Players may insist that certain parts of the scenario are unrealistic. The Controllers have the sole authority to clarify any questions regarding scenario content.

(7) State controllers are to monitor questions and activities of federal evaluators to assure adherence to State and local emergency plans and procedures. Any exercise play injects or deviation from the evaluation checklist are to be reported immediately to the lead exercise controller.

3. OBSERVER INFORMATION.

a. Purpose. The role of the observer is to watch the conduct of the exercise, players, and evaluators to gain knowledge/insights on program improvements and offer independent opinions on exercise performance.

b. Observer Guidelines.

(1) Never interfere with the conduct of exercise/drill play.

(2) Each observer will identify themselves to the controller at the location they are observing. Interact only with controllers, unless they have permission from the controller to talk to players.

(3) When approaching players for questions, only do so when there is a lull in exercise play or wait until the exercise is over.

4. EVALUATOR INFORMATION.

a. Purpose. An evaluator is assigned to each major playing element/objective to report and record the exercise/drill and gather data. Their primary role is to report on specific actions taken by players and record their observations without interfering with exercise activities. Evaluator

reports provide the major portion of the documentation needed to critique the exercise and produce an exercise report.

b. Evaluator Guidelines.

(1) Never interfere with the play/conduct of the exercise.

(2) Be familiar with the scenario and applicable objectives dealing with the evaluation assignment and with specific parts of the plan that is being evaluated.

(3) Be prepared to observe and record all events and exact times of event occurrence.

(4) The evaluator should not interrupt players in their response activities for questions but should wait until there is a lull in exercise play.

(5) Appropriate professional interaction with players assists in establishing rapport and leads to a more accurate evaluation.

Annex M (Letters of Agreement)

1. PURPOSE. To identify the agreements promulgated by the State of Mississippi with contiguous States, fixed nuclear facilities, hospitals, ambulance services, and supporting organizations regarding a fixed nuclear facility accident.

2. SITUATION. NUREG 0654 requires that plans include written agreements between organizations having an emergency response role to identify the mutually acceptable criteria for implementation of emergency response procedures.

3. CONCEPT OF OPERATIONS. The Mississippi Emergency Management Agency (MEMA) acting as the lead state agency develops and maintains the agreements identified herein. The agreements are to be reviewed annually, certified to be current, or revised and reviewed, if necessary, and maintained on file by the MEMA REP Section.

4. RESPONSIBILITIES. State Departments/Agencies and local governments who prepare and maintain REP Plans and SOPs for fixed nuclear facility contingencies are required to secure agreements with support organizations.

5. AGREEMENTS.

a. Agreements between Mississippi and Fixed Nuclear Facility Operators. Entergy Operations, Inc. operating both the Grand Gulf Nuclear Station and the River Bend Nuclear Station

b. Agreements between MEMA and Hospitals.

(1) Merit Health River Region Medical Center serving as the primary offsite medical facility for GGNS evacuation.

(2) Riverland Medical Center serving as a backup offsite medical facility for GGNS evacuation.

c. Agreements between Claiborne County Civil Defense and Ambulance Services.

(1) American Medical Response, Inc. (AMR) provides primary offsite ambulance service in response to an emergency at GGNS.

(2) MSDH will provide any additional offsite ambulance service in response to an emergency at GGNS as required.

d. Agreements between MEMA and the Mississippi National Guard.

(1) Describes a request for immediate support regarding response to a Hostile Action Based Event against Grand Gulf Nuclear Station.

(2) Direct Liaison Authority (DIRLAUTH) with the 47th Civil Support Team. This asset has resources and personnel that are critical to the response and having direct liaison ability with this military unit will ensure adequate and immediate response without delays or miscommunication.

(3) Reentry support and resources following an incident that requires evacuation, designated restricted areas, and reentry requirements.

Annex M (Letters of Agreement)
Appendix 1 (Letters of Agreement)

The following is a list of organizations having agreements with the State of Mississippi in support of the MREPP. Original signed letters are on file at MEMA.

- Entergy Operations, Inc. - Grand Gulf Nuclear Station.
- Entergy Operations, Inc. - River Bend Nuclear Station.
- River Region Medical Center.
- American Medical Response, Inc.
- Riverland Medical Center.
- Mississippi National Guard.

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Annex N (Supporting Plans and Procedures)

1. PURPOSE. To provide a listing of supporting plans/procedures, both county, and state that either augment or complement the Mississippi Radiological Emergency Preparedness Plan (MREPP).

2. SITUATION. NUREG 0654 requires each plan to contain a detailed listing of supporting plans and implementing procedures.

3. CONCEPT OF OPERATIONS.

a. Adherence to a standard format on the development of offsite plans for response to a fixed nuclear facility emergency will enhance the use of the plans and ensure that their implementation will provide uniform procedures for the protection of public health and safety.

b. State Departments/Agencies will establish response actions for complying with their assigned responsibilities.

c. Responsibility for maintaining this listing of supporting plans and procedures rests with MEMA.

d. County CDs/EMAs will report changes in response procedures or plans to MEMA.

e. Supporting Plans/Procedures are published and maintained under separate cover and are on file at MEMA.

f. If telephone numbers or addresses are listing within a state or local procedure, that agency is responsible for quarterly updates and dissemination of updates to all affected organizations.

4. LISTING OF SUPPORTING PLANS/PROCEDURES.

a. County.

(1) Natchez/Adams County Radiological Emergency Preparedness Plan.

(2) Port Gibson/Claiborne County Radiological Emergency Preparedness Plan.

(3) Copiah County Radiological Emergency Preparedness Plan.

(4) Hinds County Radiological Emergency Preparedness Plan.

(5) Vicksburg/Warren County Radiological Emergency Preparedness Plan.

b. State.

(1) Mississippi Comprehensive Emergency Management Plan.

(a) Volume I - Administrative Plan

(b) Volume II - Emergency Operations Plan

(c) Volume III - Radiological Emergency Preparedness Plan

(2) MEMA SEOC Standard Operating Procedures Manual.

(3) MEMA Fixed Nuclear Facility Emergency Public Information Standard Operating Procedures.

(4) MEMA Traffic and Access Control Handbook for Radiological Emergencies.

(5) MEMA Monitoring and Decontamination Operations Handbook.

(6) MSDH/DRH Manual of Radiological Emergency Response Team Procedures.

(7) MDOT Radiological Emergency Response Plan.

(8) MHP Radiological Emergency Plan.

(9) DMH Disaster Preparedness Plan

c. Other.

(1) Utility.

(a) Grand Gulf Nuclear Station Emergency Plan

(b) River Bend Station Emergency Plan

(c) Grand Gulf Nuclear Station Integrated Response Plan

(2) Other States.

(a) Louisiana Peacetime Radiological Emergency Preparedness Plan

(b) Southern Mutual Radiological Assistance Plan

(3) Federal.

(a) National Response Framework (NRF)

(b) Federal Radiological Monitoring and Assessment Plan (FRMAP)

(c) U.S. Environmental Protection Agency PAG (EPA 400)

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Annex O (Maps and Attachments)

1. PURPOSE. To depict visually the risk area, major evacuation routes, and the plume/ingestion exposure pathway EPZs of fixed nuclear facilities (FNFs) affecting Mississippi and to provide supporting attachments to compliment the contents of this plan.

2. CONCEPT OF OPERATIONS.

a. General. Mississippi is affected by one FNF located within the State (GGNS) and one FNF located in Louisiana (RBS).

b. Maps. Various types of maps have been prepared to assist emergency management personnel in planning for emergencies caused by incidents at FNFs affecting Mississippi.

(1) EPZ Maps. Maps show those counties that lay wholly or partially within the plume exposure pathway and ingestion exposure pathway EPZs of FNFs affecting Mississippi. These maps are further broken down by sector designations. Both the 10 and 50-mile EPZs are divided into sixteen 22.5-degree sectors emanating from the FNF site. Sector A is centered on zero degrees with 11.75 degrees on each side.

(2) Evacuation Maps. These are site-specific maps that depict the main evacuation routes and traffic flow in the event it is necessary to evacuate the population from the plume exposure pathway EPZ.

(3) Emergency Operations Maps. These maps depict more specialized aspects of emergencies associated with incidents at FNFs, i.e., agricultural land use, dairies, meat processing plants, radiological sampling, and monitoring points, etc.

c. Attachments. Supporting attachments include the public information written materials (i.e., brochures and informational handouts) to the transient and permanent population. They are updated annually and are sent to hotels, motels, businesses, residences, etc. within the plume exposure EPZ. These notices refer individuals to the telephone directory and all other sources for local emergency information, such as radio and television frequencies.

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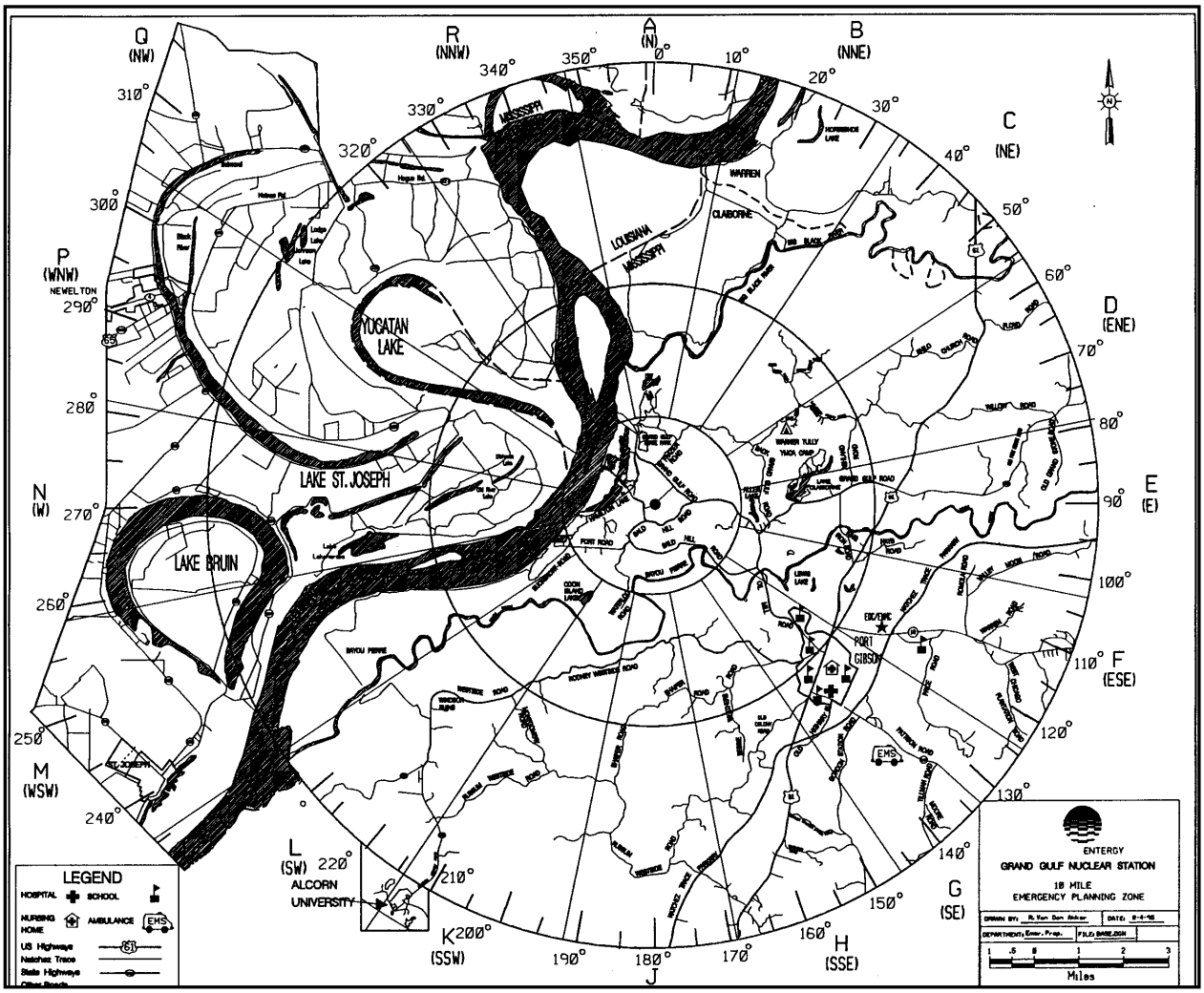
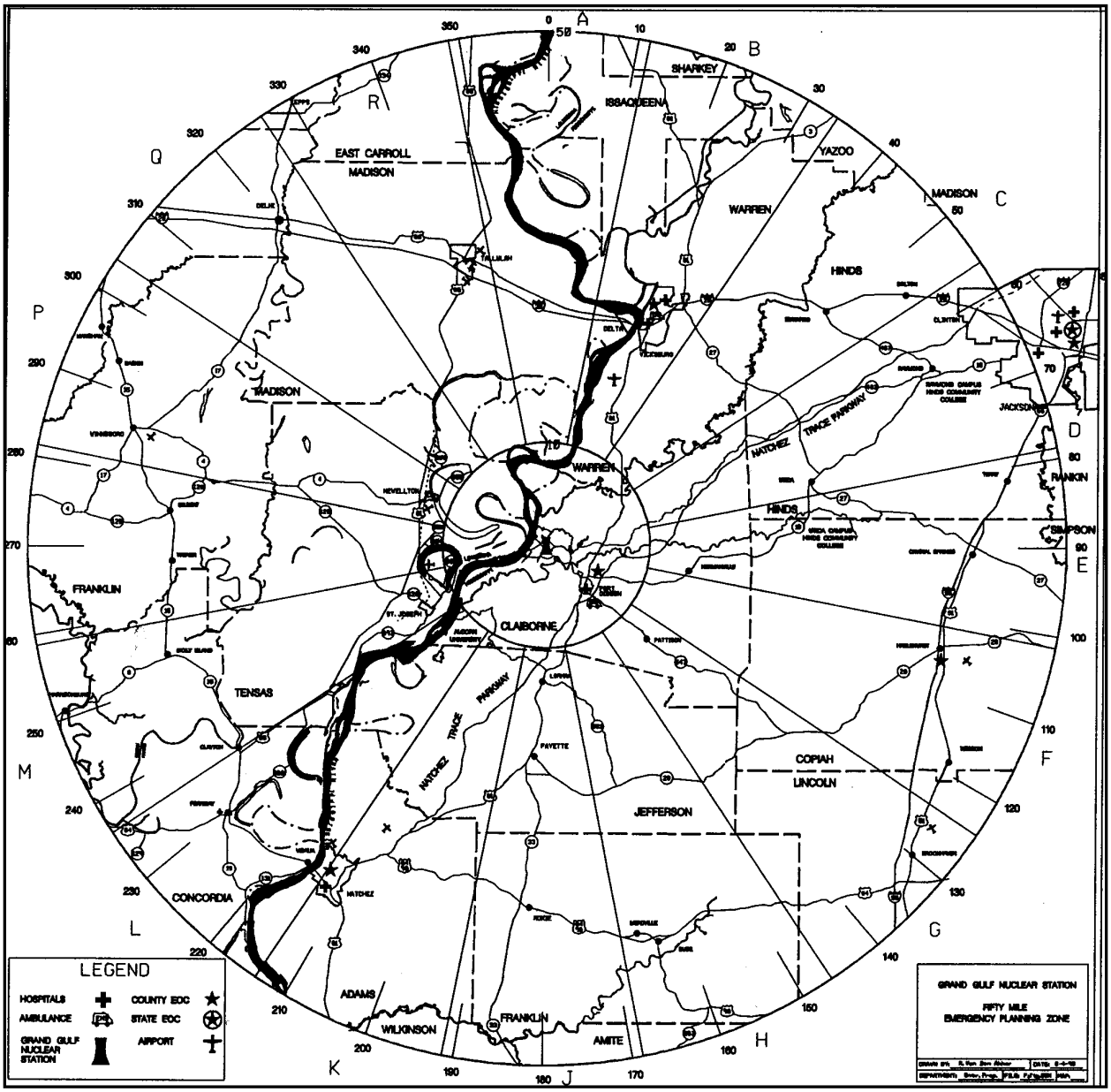
Annex O (Maps and Attachments)
Appendix 1 (Maps and Attachments)

GGNS 10-MILE (PLUME EXPOSURE PATHWAY) EPZ



GGNS 50-MILE (INGESTION PATHWAY) EPZ



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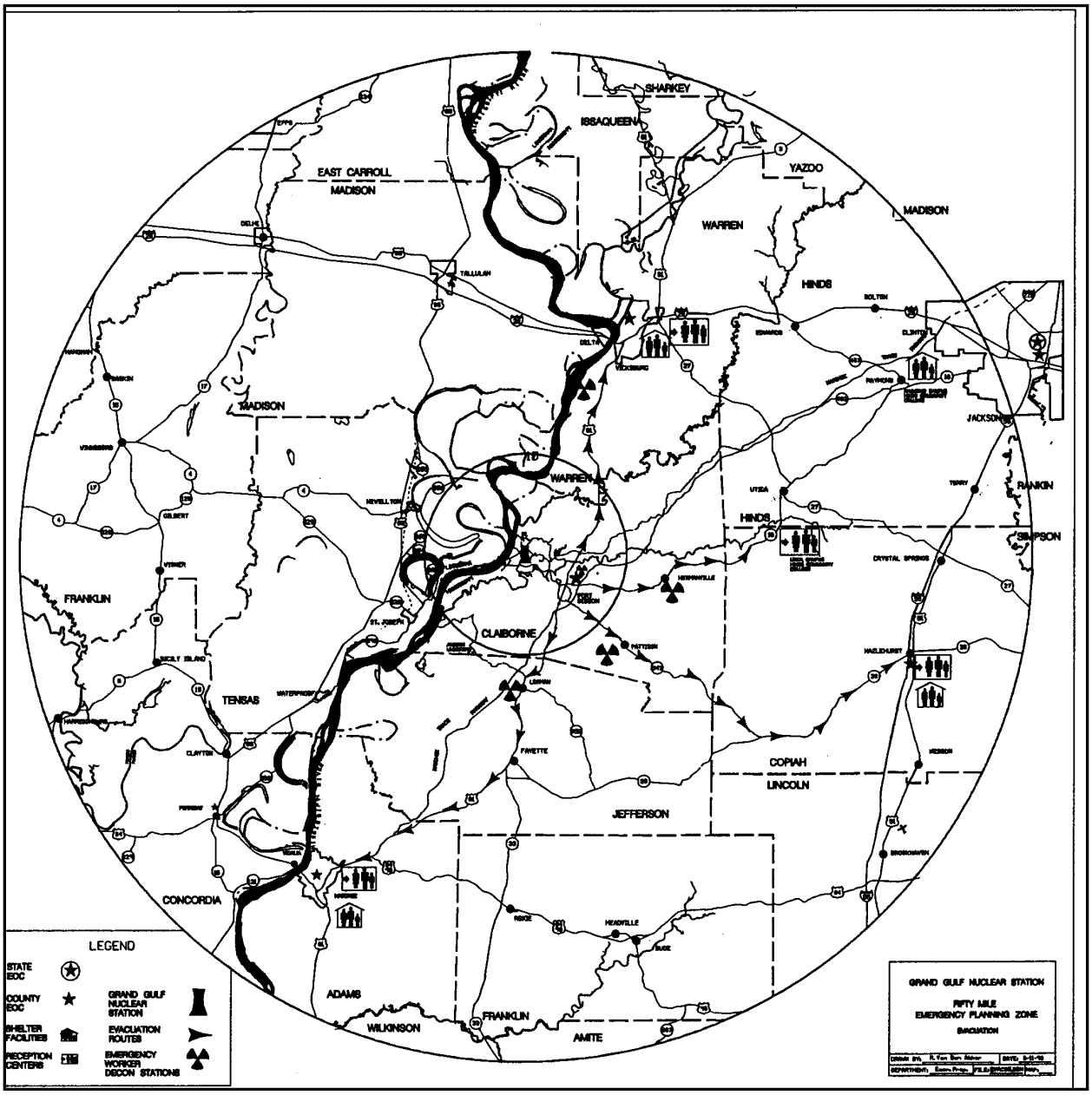
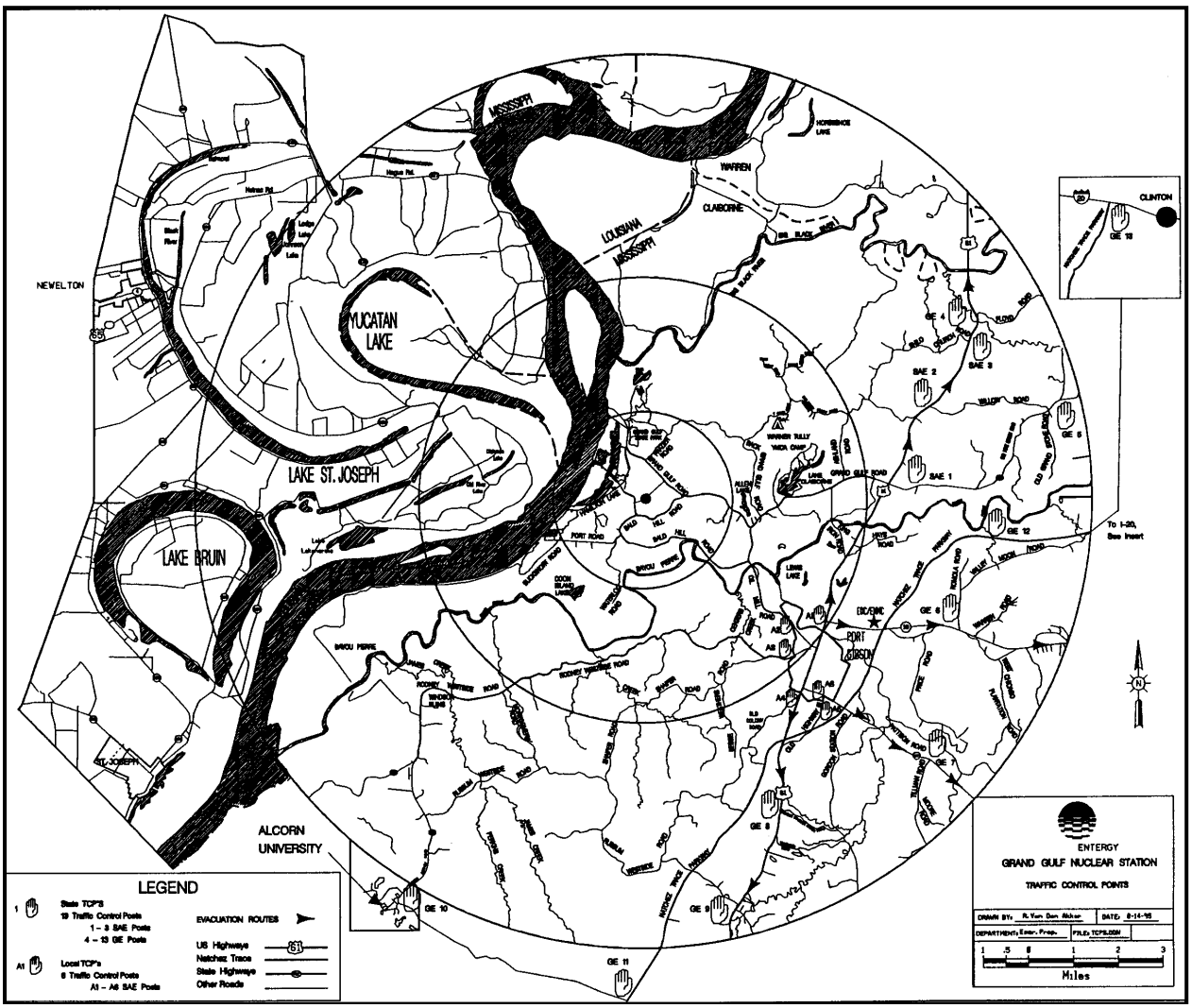


GGNS TRAFFIC CONTROL POINTS



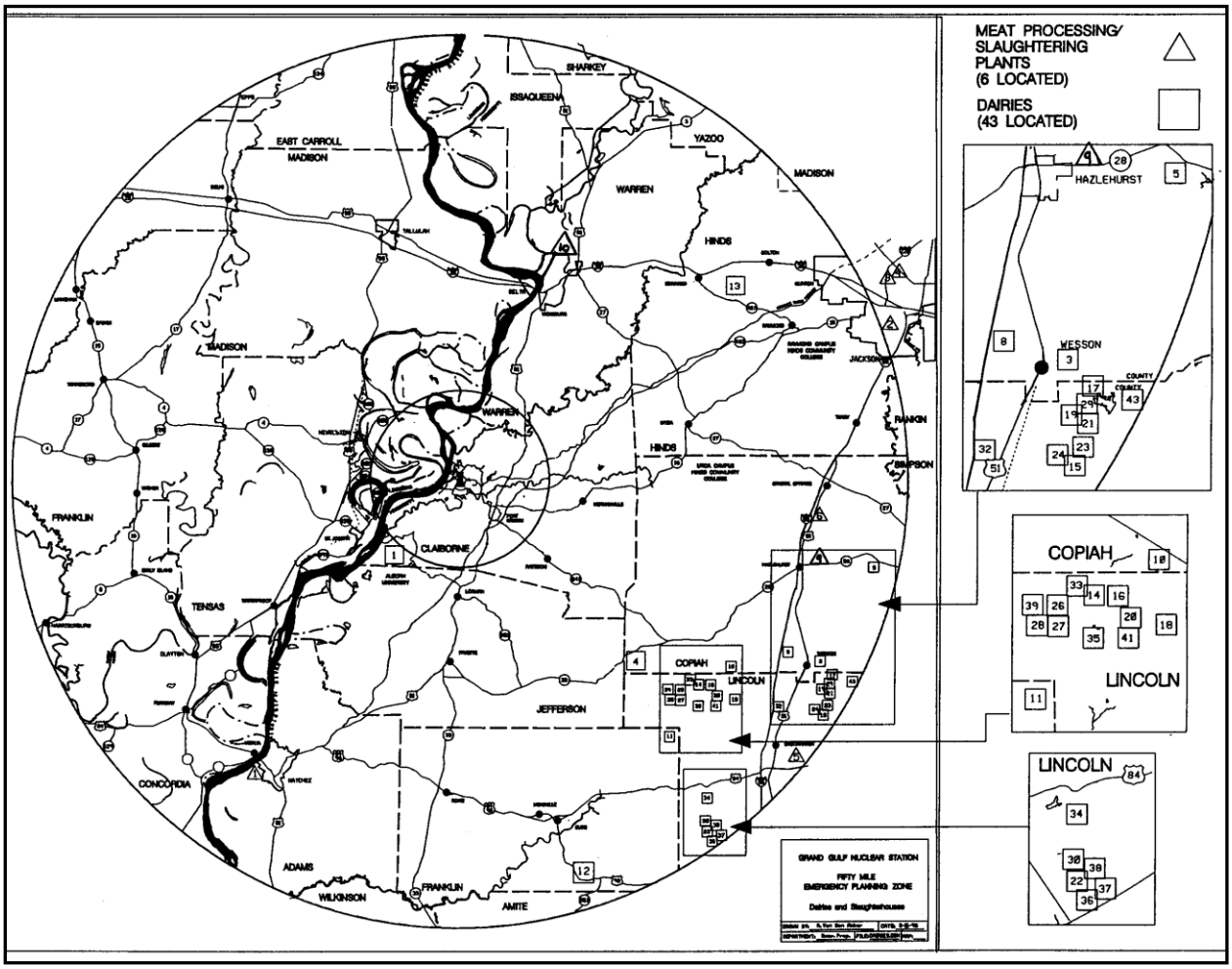
GGNS DAIRY INDEX
(GGNS & RBS)

Amite	03MAO020	Brad & Amy Bean	5630 Bean Road	Liberty 39645
Amite	03MAO021	T & R Farms (David Regan)	2296 River Road	Liberty 39645
Amite	03MAO253	Shadow Creek Dairy (Charlie Curtis)	5868 Hwy 568	Osyka 39657
Attala	04MAO012	George Dodd	Route 2, Box 49	West 39192
Copiah	15MAO070	Fred Warren, Jr. (Spring Hill Dairy)	3106 Hwy 28	Hazlehurst 39083
Copiah	15MAO002	Jackson Farm	1164 Case Road	Wesson 39191
Copiah	15MAO060	Rouchon Dairy (John)	2170 Broome Road	Wesson 39191
Copiah	15MAO080	Tim or Dan Weeks	1070 Weeks Road	Wesson 39191
Copiah	15MAO095	Stacey Newell Dairy	3639 Old Red Star Drive	Wesson 39191
Hinds	25MAO003	Dairy Production Systems	2125 Military Rd.,	Edwards 39066
Lincoln	43MAO103	Jason Rippy Dairy	135 Springfield TR. S.W.	Bogue Chitto 39629
Lincoln	43MAO135	Harold Quin Dairy	1890 Bogue Chitto Road	Smithdale 39664
Lincoln	43MAO214	Earl Brown	3128 Highway 51 SE	Bogue Chitto 39629
Lincoln	43MAO010	Leon Bardwell	901 Broadway Ext. NW	Brookhaven 39601
Lincoln	43MAO216	Whites Dairy (Myrtis White) (Shane)	1580 Wellman Dr. SE	Brookhaven 39601
Lincoln	43MAO045	Pat or Bonnie Ard	3479 Orchard Lane SE	Jayess 39641
Lincoln	43MAO282	Brian Burke	4155 Primitive Dr. SE	Ruth 39662
Lincoln	43MAO100	David Nunnery	8075 River Road S	Summit 39666
Lincoln	43MAO015	McCullough's Dairy	1855 Pleasant Ridge Road	Wesson 39191
Lincoln	43MAO046	Barry Farms (Geneva Barry)	2800 Port Barry Lane	Wesson 39191
Lincoln	43MAO055	Jimmy Britt	757 Mt. Zion Road	Wesson 39191
Lincoln	43MAO091	Dickey Martin	3421 Heuck's Retreat Road	Wesson 39191
Lincoln	43MAO102	King & King Dairy (Jennifer King)	3309 Jackson-Liberty Rd.	Wesson 39191
Lincoln	43MAO104	Cody Britt Dairy	2652 James Dr. N.W.	Wesson 39191
Pike	57MAO013	Howard Alford	2101 Highway 575 North	Magnolia 39652
Pike	57MAO078	Carroll L. Fortenberry	4088 Pike 93 South	Magnolia 39652
Pike	57MAO048	Randy & Renee McKenzie (Top Notch Dairy Farm)	1159 Love Creek Drive	McComb 39648
Pike	57MAO210	Tim Estess	1173 Old Highway 24	McComb 39648
Pike	57MAO025	Russell Smith	2116 Fox Chase Road	Osyka 39657
Pike	57MAO042	John Hall III	1070 Meadowhall Road	Osyka 39657
Pike	57MAO084	Paul D. & Janice Smith	1135 Rawls Road	Osyka 39657
Pike	57MAO088	Keith Cutrer	1063 Turtle Drive	Osyka 39657
Pike	57MAO144	Joe Deblanc/Jod	1042 Whippoorwill Road	Osyka 39657
Franklin	57MAO002	Calcote Dairy	459 Calcote Road	Brookhaven 39601

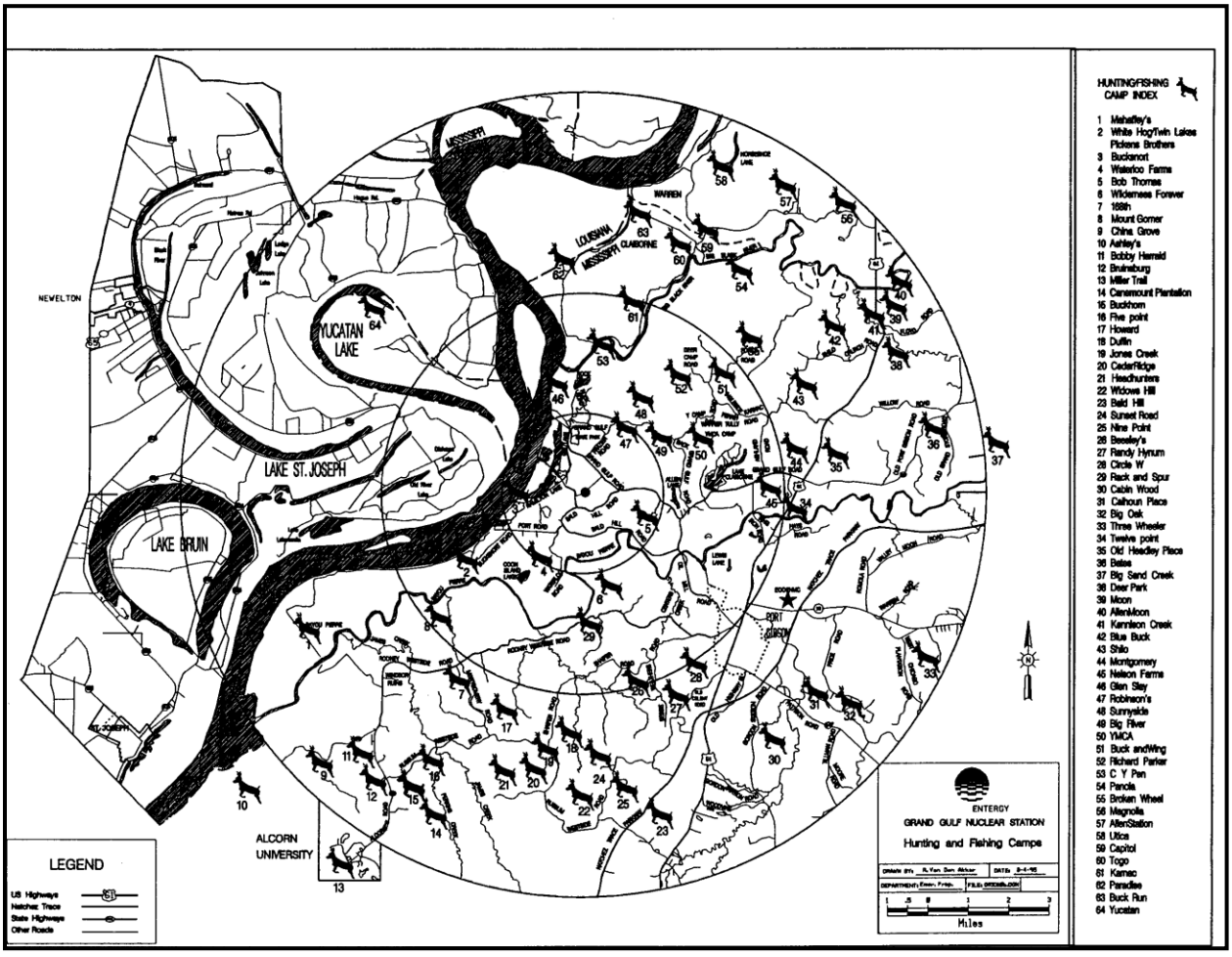
GGNS SLAUGHTERHOUSE INDEX
(GGNS & RBS)

County	Facility	Address	City/ZIP
Adams	Passback Meats	213 SGT Prentiss Dr.	Natchez/ 39120
Amite	Vine Brothers	115 Hwy. 24	Centerville/39631
Hinds	Hemphill Souse	295 Industrial Dr.	Jackson/39209
Lincoln	Jones Custom Processing	665 Oil Service Ln NE	Brookhaven/39601
Lincoln	County Meat Market	Hwy. 550	Brookhaven/39601
Copiah	Wilson Slaughter House	23086 U.S. Hwy. 51	Crystal Springs/39059
Yazoo	Jac-Pac Packing	226 W. Jefferson St.	Yazoo City/39194

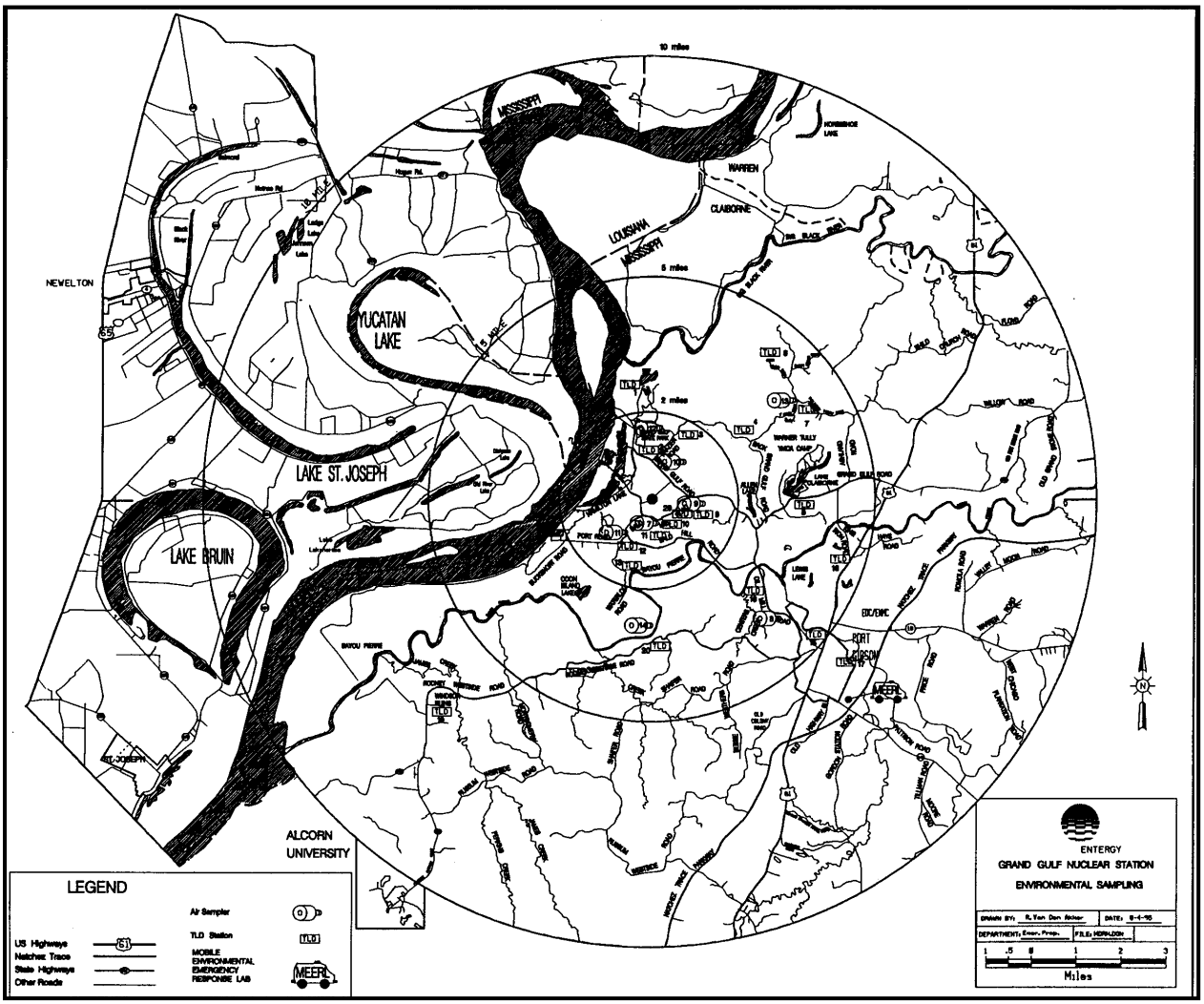
GGNS DAIRIES/SLAUGHTERHOUSES



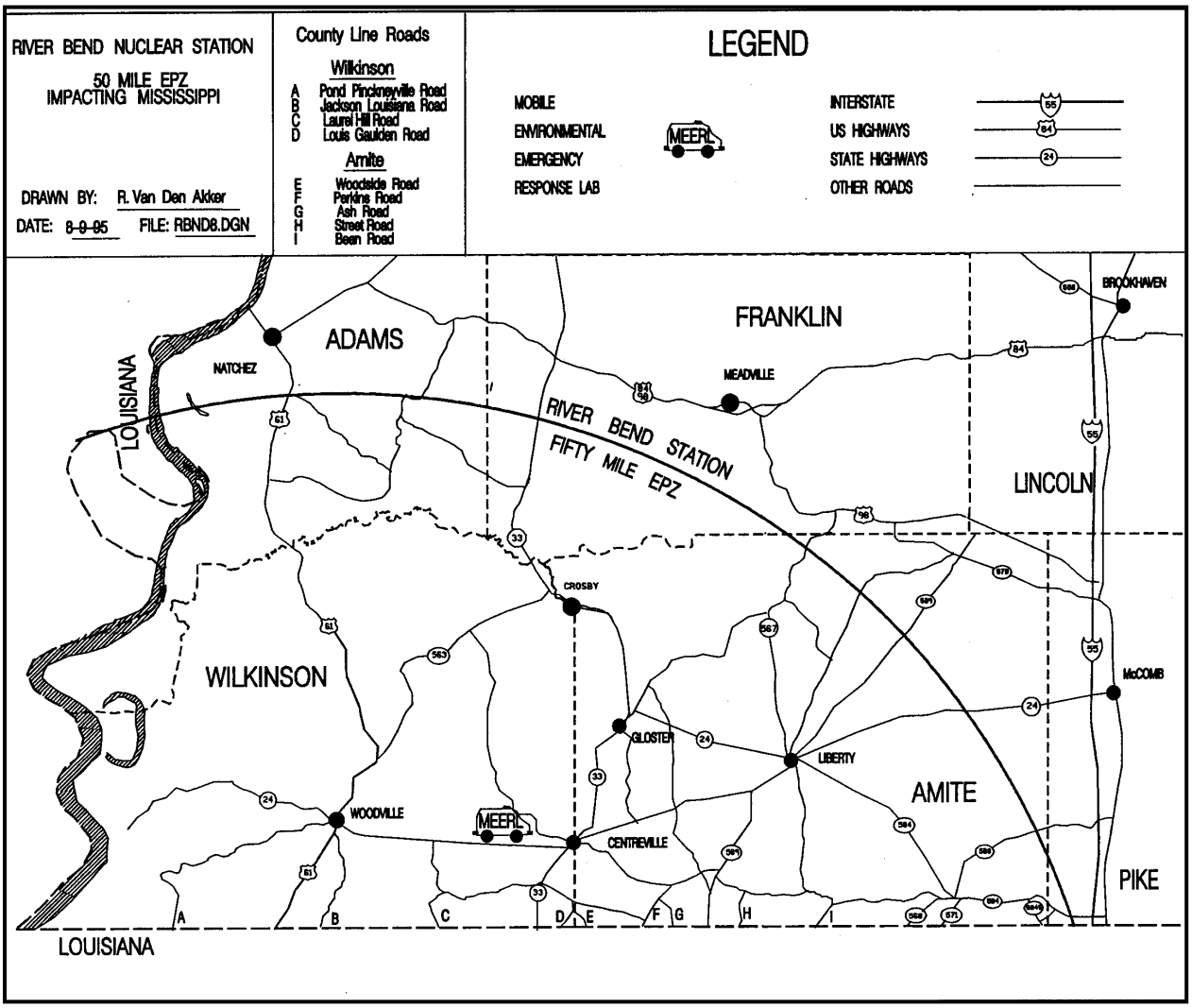
GGNS HUNTING/FISHING CAMPS



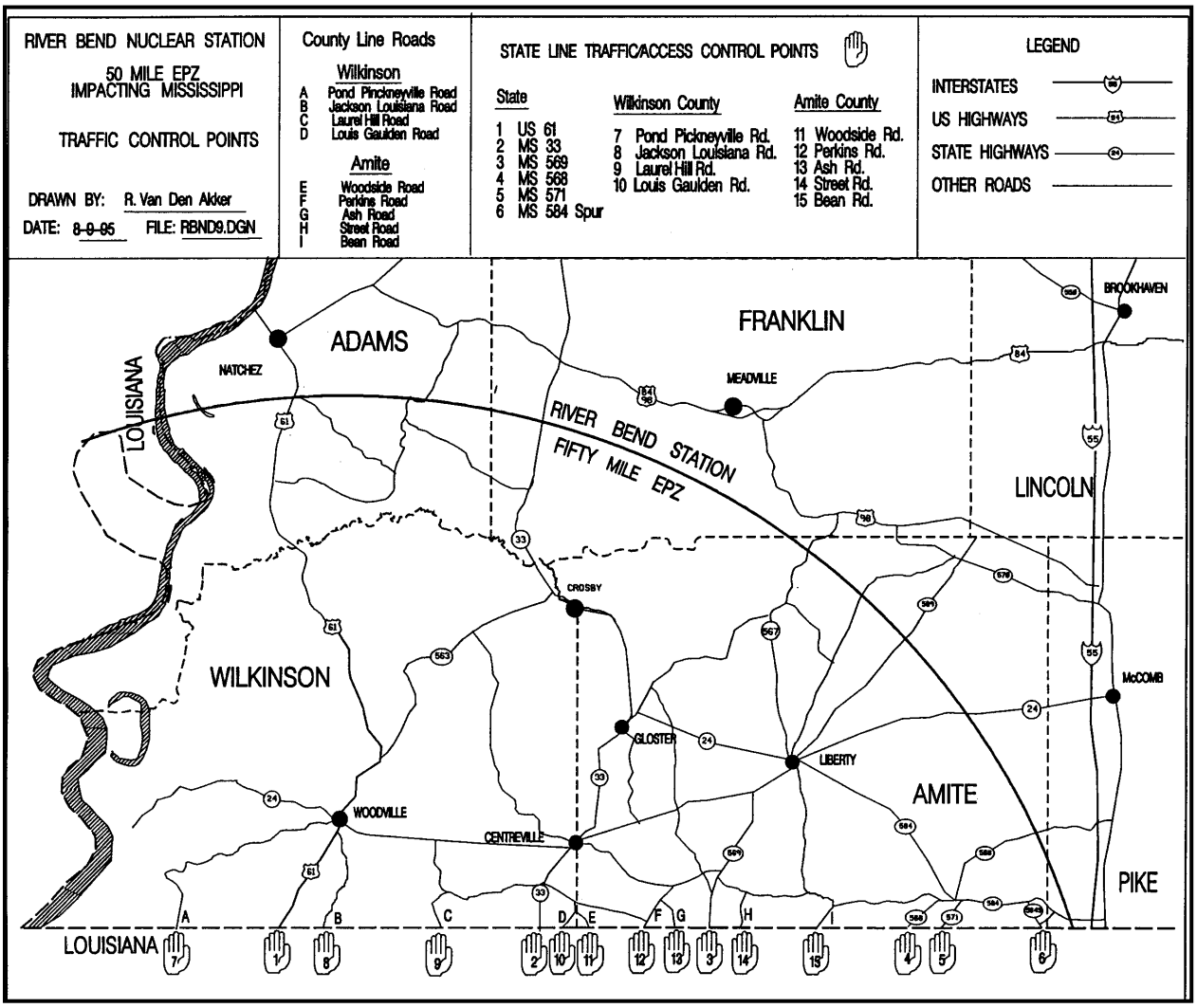
GGNS ENVIRONMENTAL SAMPLING



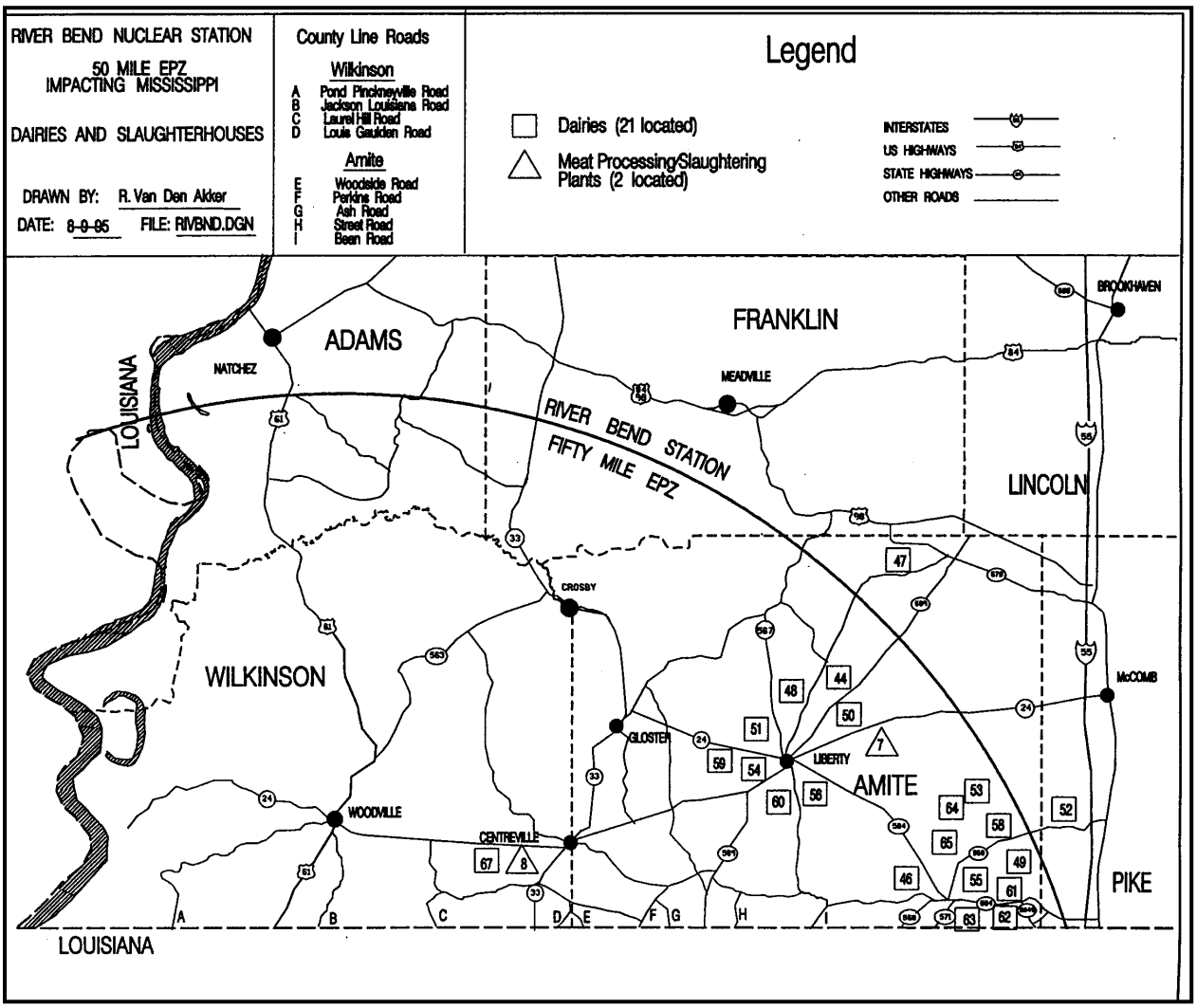
RBS 50 MILE (INGESTION PATHWAY) EPZ AFFECTING MISSISSIPPI



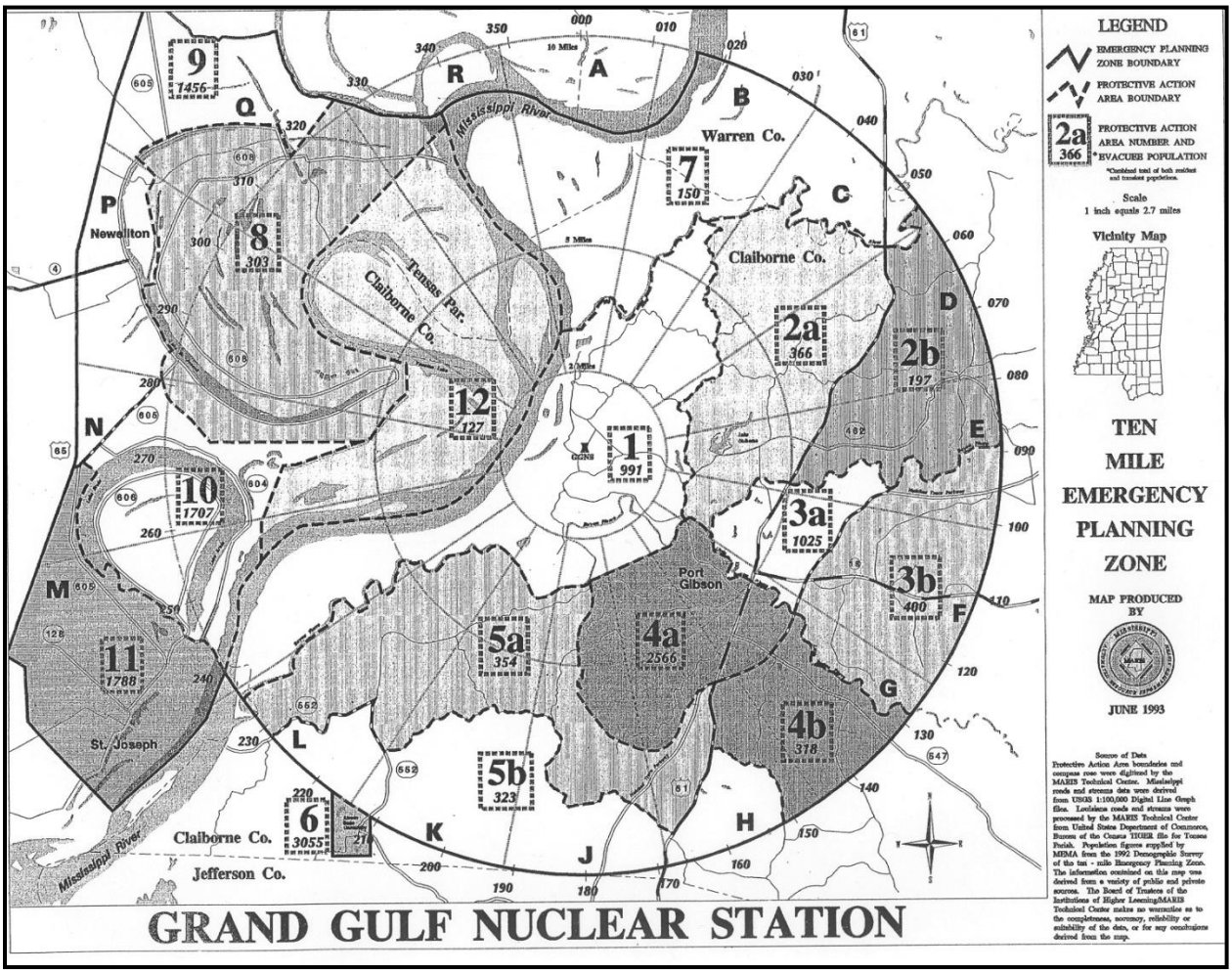
RBS TRAFFIC CONTROL POINTS



RBS DAIRIES/SLAUGHTERHOUSES



GGNS 10-MILE EPZ PROTECTIVE ACTION AREAS



POULTRY PRODUCERS IN RISK, HOST, AND INGESTION COUNTIES

(GGNS & RBS)

Debbie Shelton (Claiborne)	Black Forty Farms (Copiah)	Brushy Creek Farm (Copiah)
C&R (Copiah)	Caro Farm, Inc. (Copiah)	Carlisle Farm, Inc. (Copiah)
Charles Lowe Chicken Farm (Copiah	Circle H Broiler Farm (Copiah)	Dan Reeves (Copiah)
DJ's Poultry Farm (Copiah)	Hall Poultry Farm (Copiah)	Homochitto Farm (Copiah)
Joseph & Maria (Copiah)	Le Vu Poultry (Copiah)	Lee Caro (Copiah)
Lockharts Farms (Copiah)	M&M Poultry Farm (Copiah)	Norman Hinton (Copiah)
Spring Hill Farm (Copiah)	St. Mary Poultry Farm (Copiah)	Sweetwater Farm (Copiah)

MS Agri-Centers and Multi-Purpose Centers
(Livestock Sale Facilities)

Alcorn County Crossroads Arena 2800 South Harper Road Corinth, MS 38834 Phone: 662-287-7779; Fax: 662-287-8843 Website: www.crossroadsarena.com E-mail: rchurchwell@elw.com	**Amite County** Ethel Vance Park PO Box 523 Liberty, MS 39645 Phone: 601-657-8016; Fax: 601-657-9283
Benton County Benton County Agri-Center Highway 5 North Ashland, MS 38603 Phone: 662-224-9537; Fax: 662-224-6303	**Bolivar County** Calhoun County Multi-Purpose Building PO Box 118 Pittsboro, MS 38916 Phone: 662-412-3177; Fax: 662-412-3177
Chickasaw County Chickasaw County Coliseum 225 N. Jackson Street Houston, MS 38851; Phone: 662-456-4556	**Clarke County** Clarke County Multipurpose Center PO Box 109 Quitman, MS 39355 Phone: 601-766-3951; Fax: 601-776-1023
Coahoma County Clarksdale Expo Center PO Box 160 Clarksdale, MS 38614 Phone: 662-627-7337; Fax: 662-627-1313 E-mail: ccoc@clarksdale.com	**Copiah County** Copiah County Fairgrounds PO Box 789 Hazlehurst, MS 39083 Phone: 601-892-1809; Fax: 601-892-2873 E-mail: shelbyb@ext.ms.state.edu
Covington County 68 Collins Industrial Park Drive Seminary, MS 39479 Phone: 601-765-8252; Fax: 601-765-5009	**Forrest County** Forrest County Multi-Purpose Center Po Box 1151 Hattiesburg, MS 39403 Phone: 601-583-7500; Fax: 601-583-7504 E-mail: fcmpc@netdoor.com Website: www.co.forrest.ms.us
George County George County Multi-Purpose Arena PO Box 441 Lucedale, MS 39452 Phone: 601-947-2755; Fax: 601-947-2650 E-mail: gcedf@datsync.com	**Greene County** Greene County Rural Events Center Greene County Park Commission PO Box 460 Leakesville, MS 39451; Phone: 601-394-2394 Fax: 601-394-4650
Hancock County Hancock County Multi-Purpose Center 4184 Kiln-Delisle Road Kiln, MS 39556 Phone: 228-255-0807; Fax: 228-216-4644	**Harrison County** Harrison County Fairgrounds 15321 County Farm Road Gulfport, MS 39503 Phone: 228-832-8620; Fax: 228-831-3364
Jackson County Jackson County Fairgrounds PO Box 998 Pascagoula, MS 39568 Phone: 228-762-6043; Fax: 228-769-3353 E-mail: jim-hart@co.jackson.ms.us	**Jasper County** Jasper County Livestock Exhibition Center PO Box 506 Bay Springs, MS 39422 Phone: 601-764-2314; Fax: 601-764-2035

Jones County Magnolia Expo Center 1457 Ellisville Blvd. Laurel, MS 39440 Phone: 601-649-9010; Fax: 601-649-7824 E-mail: somsfair@bellsouth.net	**Lamar County** Lamar County Multi-Purpose Center PO Box 1024 Purvis, MS 39475 Phone: 601-794-3906; Fax: 601-794-1049
Lauderdale County Lauderdale County Agri-Center 1022 Highway 19 South Meridian, MS 39301 Phone: 601-482-8498; Fax: 601-483-4341 Website: www.lauderdalecounty.org/agri-center.htm E-mail: agricntr@lauderdalecounty.org	**Lee County** Lee County Agri-Center PO Box 1480 Verona, MS 38879 Phone: 662-566-5600; Fax: 662-566-5604 Website: www.leecountyagricenter.com E-mail: avantegarde04@hotmail.com
Lee County Lee County Agri-Center PO Box 1480 Verona, MS 38879 Phone: 662-566-5600; Fax: 662-566-5604 Website: www.leecountyagricenter.com E-mail: avantegarde04@hotmail.com	**Leflore County** Leflore County Civic/Agri-Center PO Box 1659 Greenwood, MS 38935 Phone: 662-453-4065; Fax: 662-453-4067 E-mail: mcqueen@msdelta.com garycivic@hotmail.com
Lincoln County PO Box 231 Brookhaven, MS 39602 Phone: 601-833-3791; Fax: 601-835-1995	**Madison County** Canton Madison County the Multi-Purpose Center City of Canton Parks & Recreation PO Box 1605 501 Soldiers Colony Road Canton, MS 39046 Phone: 601-859-4358; Fax: 601-859-0349 Website: www.cantonmcmc.com E-mail: terry@cantonmcmc.com michael@cantonmcmc.com
Marion County Columbia Exposition Center 150 Industrial Park Drive Columbia, MS 39429 Phone: 601-736-6204	**Marshall County** Marshall County Ag & Community Center 1569 Highway 7 North Holly Springs, MS 38635 Phone: 662-252-5441; Fax: 662-252-5461 E-mail: mcfairgrounds@yahoo.com
Montgomery County Montgomery County Coliseum 200 Recreation Park Drive Winona, MS 38967 Phone: 662-283-4828; Fax: 662-283-5986 Website: www.montgomerycountyedp.org E-mail: edp@duckwood.net	**Mississippi Equine Center** PO Box 892 Jackson, MS 39205-0892 E-mail: mikeb@mdac.state.ms.us
Neshoba County Neshoba County Coliseum 12000 Highway 15 North, Suite 1 Philadelphia, MS 39530 Phone: 601-656-5775; Fax: 601-656-4098 E-mail: neshoba3@bellsouth.net	**Oktibbeha County** Mississippi Horse Park Agri-Center & Fairgrounds PO Box 6065 Mississippi State, MS 39762 Phone: 662-325-9350; Fax: 662-325-9353 Website: www.mississippihorsepark.msucares.com E-mail: bbmiller@ads.msstate.edu

Pearl River County Pearl River County Fairgrounds Phone: 601-916-0983 **Perry County** E-mail: bertie@c-gate.net	**Pontotoc County** Pontotoc County Agri-Center 430 CJ Hardin Drive Pontotoc, MS 38863 Phone: 662-489-3946; Fax: 662-489-2320 E-mail: ace041996@yahoo.com
Prentiss County Prentiss County Agri-Center 2301 N. 2nd Street Booneville, MS 38829 Phone: 662-728-3946	**Prentiss County** Prentiss County Agri-Center 2301 N. 2nd Street Booneville, MS 38829 Phone: 662-728-3946
Rankin County - Cotton Yancey Rankin County Pavilion 601 Marquette Brandon, MS 39042 Phone: 601-238-3332	**Scott County** Scott County/Forest Coliseum 151 Erle Johnston Drive Forest, MS 39074 Phone: 601-469-2928; Fax: 601-469-2928 Website: www.Forest-MS.com E-mail: brendacoliseum@localink4.com
Smith County Smith County Ag Center PO Box 160 Raleigh, MS 39153 Phone: 601-782-4454; Fax: 601-782-4002	**Stone County** Stone County Multi-Purpose Arena PO Box 7 Wiggins, MS 39577 Phone: 601-928-4912
Tippah County Tippah County Coliseum PO Box 484 Ripley, MS 38663 Phone: 662-837-8184; Fax: 662-837-4208	**Tishomingo County** Tishomingo County Fairgrounds 1008 Battleground Dr. Rm 106 Iuka, MS 38852 Phone: 662-423-7016; Fax: 662-423-7018 E-mail: tishomin@ext.msstate.edu
Tunica County Tunica Arena and Exposition Center 3873 US Highway 61 North Tunica, MS 38767 Phone: 662-363-3299; Fax: 662-363-3152 Website: www.tunicaarenaexpo.com E-mail: arena@tunicacounty.com	**Walthall County** South West Events Center Phone: 601-876-2680
Washington County Washington County Convention Center PO Box 158 Greenville, MS 38702 Phone: 662-332-0488; Fax: 662-334-2785	**Yalobusha County** Yalobusha Multi-Purpose Building PO Box 610 Coffeeville, Ms 38922 Phone: 662-675-2730 E-mail: stevec@ext.msstate.edu

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Annex P (Hostile Action Plan)

1. GENERAL.

a. Purpose.

(1) A hostile action-based incident is considered a security-based incident. Response to a security-based incident at the Grand Gulf Nuclear Station is the joint responsibility of the nuclear power plant owner/operator, and local, state, and Federal agencies. In the event of an incident, Grand Gulf Nuclear Station notifies the Mississippi authorities and US Nuclear Regulatory Commission (US NRC) and identifies the type of security based incident.

(2) Grand Gulf Nuclear Station together with local, State, and Federal government agencies defined in this plan work together in a joint, cooperative effort to prepare for, respond to, and recover from a security-based incident at the Grand Gulf Nuclear Station. Each agency defines its role, prepares plans, trains staff, and conducts exercises in advance to ensure that it will be able to coordinate all activities with other agencies and respond effectively if an incident occurs.

(3) The location of the incident will be treated as a crime scene. As such, preservation and collection of evidence is critical for apprehending the suspects and judicial administration. However, maintaining nuclear power plant security, evacuating, and treating victims of a security-based incident, and preservation of human life are the primary concerns. Therefore, the Incident Commander / Unified Command needs to coordinate response operations to minimize potential disruptions between the plant integrity, law enforcement/security operations, and criminal investigative operations.

b. Response.

(1) Grand Gulf Nuclear Station will respond to and initially classify the incident. They will activate their Site Emergency Plan and notify Mississippi authorities and/or the United States Nuclear Regulatory Commission (NRC) Operations Center.

(2) Although limited federal response elements may arrive within the first 2 hours following a security-based incident, most will not arrive and be positioned to provide required support at the scene for 4 hours following initial notification. Under the Atomic Energy Act of 1954 as Amended, 42 U.S.C. 2271 Chapter 18, and section 221 and Memorandums established with the NRC, the Federal Bureau of Investigation (FBI) shall investigate all alleged or suspected criminal violations of said Act. Upon notification of a criminal violation, the FBI may have an immediate response to the facility and provide the resources as necessary.

(3) Mississippi authorities will provide an initial response per the Grand Gulf Nuclear Station Integrated Response Plan.

(4) The nuclear power plant owner/operator, local, State, and Federal agencies will provide the appropriate command officers to the Incident Command Post to represent their respective agencies in the decision-making process. They may also provide a Public Information Officer to the Joint Information Center (JIC) to represent their respective agencies/organizations to the written and electronic media.

c. Initiating Conditions for Emergency Notification. Emergency Action Levels (EAL) for a security-based incident are developed by Grand Gulf Nuclear Station (GGNS).

2. COMMAND AND MANAGEMENT.

a. Overview.

(1) Command and Control for a security-based incident will be per the National Incident Management System (NIMS) Incident Command System (ICS) and therefore similar to that used for other emergencies or disasters.

(2) A large number of private, local, state, and federal agencies that could respond to a security-based incident and the potential scope, complexity, and catastrophic effects that may be associated with such an event requires that effective coordination be maintained between all levels of government throughout the response. The initial local response elements must establish command and control mechanisms designed to reduce confusion and optimize the use of available assets.

(3) Claiborne County Sheriff along with the nuclear power plant owner/operator will implement the Incident Command System when responding to a security-based incident. Due to the scope and complexity of the response, multiple agencies will become involved; the Incident Command System may transition into a Unified Command. As a team effort, Unified Command allows all agencies with jurisdictional authority or functional responsibility for the incident to jointly provide management direction to an incident at a single Command Post and to establish a common set of objectives and strategies with a single Incident Action Plan (IAP). The plant, law enforcement, fire, emergency medical services, and other disciplines must work together to establish these objectives, set the appropriate strategies, and determine the proper tactics based on incident priorities to meet the identified objectives. The Unified Command will continue to operate at the scene throughout the response until deemed appropriate based on the de-escalation of the incident to transition back to a single Incident Commander.

(4) A security-based incident may require the opening of Public Reception / Decontamination Centers, Congregate Care Centers and Emergency Worker Decontamination Centers per existing Radiological Emergency Preparedness requirements, each with its incident command structure. An Area Command/Unified Area Command may be established to provide coordination between the security-based incident response and the operations of the centers. Area Command will set the overall priorities and determine critical resource allocation to ensure the efficient use of resources.

(5) Chain of command is a component of the National Incident Management System. It is the orderly line of authority and reporting relationships within the ranks of the organization, with lower levels subordinate to and connected to higher levels. The chain of command is used to communicate directly and maintain management control. The chain of command, however, does not apply to the exchange of information. Although work assignments and resource orders must flow through the chain of command, members of the agencies/ organizations may directly communicate with each other to ask for or share information. Incident Command System team members work within the Incident Command System's position descriptions and follow the designated reporting relationships, regardless of their non-emergency positions or everyday administrative chain of command.

b. Responder Accountability. The rapid and accurate tracking of personnel and equipment at all jurisdictional levels and within individual functional areas during incident operations is essential. Claiborne Country EMA will utilize a check-in process to accomplish this.

c. Verification of Credentials. The credentialing process for personnel other than law enforcement, emergency medical services, and fire department will be handled directly at the traffic access and control points. Responders will present their official identification at the control points, where their information will be communicated back to the ICP. Only authorized vehicles will be allowed access.

d. Emergency Operations Center (EOC). Once activated, the Claiborne County EOC will coordinate support to Incident Command, or Unified/Area Command if established, and facilitate intra- and inter-jurisdictional support.

e. Notification of Personnel. Grand Gulf Nuclear Station will make initial notification of the event to the Mississippi authorities and US NRC. These agencies will follow their existing procedures to notify and dispatch the appropriate personnel.

f. Agency Representatives/Grand Gulf Station Operations, Security and Radiological Protection.

(1) Identified representatives from nuclear plant Operations, Security, and/or Radiological Protection Departments will serve as nuclear power plant liaisons and Technical Experts to the Incident Command Post. The Technical Experts have been delegated authority to make decisions on matters affecting the nuclear power plant's participation in incident management activities following appropriate consultation with the leadership of the Operations, Security, and Radiological Protection Departments. Sharing information with their counterparts on-site at the nuclear power plant will facilitate a coordinated response between the plant's personnel and the off-site response organizations (ORO) responders based on the priorities and objectives developed to mitigate the incident.

(2) The ORO Representatives will ensure that their resources (personnel and equipment) are accounted for and directed to their proper assignment. They will ensure that the resources are supported while assigned to the incident. The ORO Representatives will be able to provide information on the capability and limitation of their resources. Also, they will have a working knowledge of their agencies /organization's policies and procedures and be able to guide the Incident Command for operational assignments and responsibilities.

g. Resources Management. Maintaining adequate reserves is a component of resource management and a key consideration that must be taken into account when managing resources for a security-based incident. Adequate reserves must be maintained to meet the anticipated demands based on the objectives and strategies developed along with any contingency plans as determined by Incident Command. In planning for adequate reserves, Incident Command determines the appropriate level of resources by kind and type to be held in reserve. All resource requests should be made via WebEOC.

h. Facility Employee Identification. If a security-based incident occurs at Grand Gulf Nuclear Station, a perimeter will be established to control ingress and egress to and from the nuclear power plant site. With this perimeter in place, only authorized persons will be permitted to enter the perimeter and incident facilities, per the Grand Gulf Nuclear Station Integrated Response Plan and the MREPP.

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i. Recovery. If the security-based incident is considered to be the result of terrorism or Atomic Energy Crime, FEMA and the FBI will conduct crisis and consequence management activities concurrently and per the provisions of the National Response Framework (NRF). The FBI will assume Incident Command until such time the threat has been mitigated and/or the investigation is complete. The FBI will continue law enforcement investigations through the establishment of a Joint Operations Center (JOC), in concert with the state and local law enforcement agencies, while FEMA will coordinate support under the National Response Framework.

j. Radiological Emergency Preparedness Training.

(1) Each off-site response organization ensures the training of appropriate individuals. The training programs provided will be sufficient to satisfy radiological emergency response training per NUREG-0654/FEMA-REP-1, Revision 1. Each off-site response organization shall participate in and receive training where mutual-aid agreements exist between agencies/organizations. The training shall also be offered to other member organizations of the mutual-aid district. Each organization shall offer the initial and annual retraining of personnel with emergency response functions and responsibilities.

(2) Just-in-time training will be provided to mutual aid agencies and personnel providing assistance when local resources have been exhausted or are insufficient due to the nature of the incident. Just-in-time training will be provided at an appropriate location based on the assignment. This will include job-specific and/or facility awareness training based on incident requirements (i.e., nuclear power plant response vs. decontamination center or access control point staffing).

3. COMMUNICATIONS.

a. Overview.

(1) Effective, reliable, and integrated communications systems are vital for mounting and sustaining an effective response to a security-based incident. Interoperable communications equipment will permit a coordinated response and allow the full engagement of all available and necessary assets.

(2) All personnel reporting to the ICP must have their own, reliable means of communication and must possess decision making authority for their respective organizations. Responders should denote agency affiliations, and unit identifications when they are outside their home jurisdictions or Incident Command System positions (i.e. Operations Section Chief, Strike Team 1, etc.) when communicating on a shared radiofrequency.

(3) Communications between off-site response organization(s) (ORO(s)) and the Grand Gulf Nuclear Station must be conducted in a secure environment to prevent interception by those who initiated and conducted the attack. Information regarding Command Post locations, decontamination corridors, public evacuation routes, staging areas, etc. could be used for additional targeting operations. Further, misinterpretation of emergency communications could lead to broadcasts of inaccurate information which may ultimately endanger the public or cause undue fear and panic. Specific communications methods are outlined in the Grand Gulf Integrated Response Plan and MREPP.

b. Notification of Credible Threat. Grand Gulf Nuclear Station may receive information of a credible threat to the facility through several channels, including direct receipt, Mississippi authorities, FBI, or from the USNRC. Grand Gulf Nuclear Station will initially contact the twenty-four-hour warning points via Inform. The State EOC will notify other agencies including fire, police, and emergency medical services for support if needed. The FBI will be notified of this threat based on their procedures.

c. Notification of Incident. Grand Gulf Nuclear Station will contact Mississippi authorities and US NRC Operations Center per the Grand Gulf Nuclear Station Integrated Response Plan and/or station procedures.

d. Confirmation (unless verification is not required based on existing policy or procedures). If notification from the nuclear power plant was received by means other than the agreed-upon system that either a credible threat has been received/detected or a security-based incident has occurred, the initial message will be verified per the Grand Gulf Nuclear Station Integrated Response Plan.

4. TACTICAL.

a. Incident Command Post Locations. These locations have been identified as primary and alternate ICP locations and may be selected for the initial response.

(1) Claiborne County Emergency Operations Center – 2033 Mississippi Highway 18 E, Port Gibson, Mississippi – primary.

(2) Alternate locations are contained in the Grand Gulf Integrated Response Plan.

a. Staging Area Locations. Staging Areas are designed to hold unassigned and available resources manned by Claiborne County personnel and/or Operations section under Incident Command. Locations located outside of the Owner Controlled Area have been designated as potential staging areas to provide a base for registration, just in time training, dissemination of personal protective equipment (PPE), unloading and transferring of resources, assembly of persons, and as a rallying point for mutual aid forces. These areas have been listed in the Grand Gulf Nuclear Station Integrated Response Plan and will be revealed to responders on a need to know basis.

b. Placement of Resources. The pre-positioning of resources affords the off-site responders and nuclear power plant personnel to respond to the scene the ability to obtain the requisite or supplemental equipment needed to respond to an incident. These locations have been designated

as warehousing/storage areas for the pre-deployment of resources and equipment in the Grand Gulf Nuclear Station Integrated Response Plan.

c. Access Control Points.

(1) Incident Command may request that off-site law enforcement officers establish a security cordon (Buffer Zone) around the Owner Controlled Area. Access control points have been identified around the Owner Controlled Area to manage access onto the site. The extent or severity of the incident at the nuclear power plant will dictate the number of access control points to be staffed. This will be coordinated between Incident Command and Grand Gulf Nuclear Station.

(2) Law enforcement officers will respond to individuals attempting to circumvent the access control points or who are found to be intentionally and without authority or permission to enter or remain on the Grand Gulf Nuclear Station. Individuals will be detained and identified, and notification will be made to the incident command post, or the Agency Representative, to determine the appropriate enforcement action.

c. Drop Point/Tactical Holding Area/Launching Area.

(1) A Drop Point/Tactical Holding Area/Launching Area is a location separate from the Staging Area where assigned personnel gather to receive a briefing from their supervisor(s) on specific tasks before the beginning of their tactical assignments. A Drop Point/Tactical Holding Area/Launching Area is a location where detailed tactical operations plans are developed within the Operations Section to effectively perform the strategy identified to meet the defined objectives. The locations for the drop points have been established to provide tactical options and to accommodate various atmospheric conditions; however, the locations may change based on tactical needs and/or assessments. Note, these areas may be used for Incident Command and Staging Areas based on the type of incident.

(2) These locations have been identified in the Grand Gulf Nuclear Station Integrated Response Plan.

d. Tactical Operations Center (TOC).

(1) A Tactical Operations Center is a centralized unit designed for and tasked with gathering and analyzing all tactically significant information, disseminating information to the tactical component and Negotiations Operation Center, managing tactical assets at the nuclear power plant site, and supporting the overall mission. The TOC is a facility established for the Operations Section to support investigative needs and operational planning under the direction of the Operations Section Chief. Responsibilities of the TOC include: receive and record tactical

information, evaluate its validity and interpret its significance, determine the predictability of the information, and disseminate this information promptly. A TOC is to be located: in a secure area separate from the immediate crisis site and away from the public and media, close to a tactical rehearsal area and a helicopter landing zone and should have space available for Air and Technical Operations personnel, a Medical Support Team, information boards, and a planning and briefing area. The role of a TOC is to provide the following information to tactical response teams if available: a description of the incident site, subject information, hostage information, weapons information, and a communications plan.

(2) This provides for a coordinated response by ensuring a proper flow of information and intelligence, eliminates the loss of tactically significant intelligence, and establishes an organized and systematic flow of tactical intelligence. Mississippi authorities will work with all affected agencies to establish any such locations.

5. PROTECTIVE MEASURES.

a. Traffic Control Points. In the event of an incident that requires the control of access beyond the boundaries of the nuclear power plant site or a precautionary evacuation due to a potential loss of physical control of the nuclear power plant, additional Traffic Control Points may be activated. The Mississippi Radiological Emergency Preparedness Plan addresses the establishment of traffic control points within the 10-mile emergency planning zone. The activation of these points will be coordinated between Incident Command and Mississippi authorities. Inbound Responders through Mutual Aids may be directed to report to the Staging Area. These locations are outlined in the Grand Gulf Integrated Response Plan.

b. Exposure Control.

(1) Criteria for controlling radiation doses to emergency responders are detailed in the MREPP. The criteria include the use of protective equipment/supplies and radiation monitoring instruments, as well as information on measuring radiation doses to assure doses are below allowable dose limits.

(2) Each off-site responder issued PPE will receive a briefing covering the operability of dosimetry, periods for reading dosimetry (not to exceed 30 minutes), recording and reporting dosimetry readings, maximum allowable dose limits, procedures to follow if these limits are approached or exceeded. The briefing will also review the instructions on the use of KI along with any contraindication to its use. Just-in-time training will be provided as required. See Radiological Emergency Preparedness Training section.

(3) The issuance of KI and dosimetry, exposure records, KI Consent, and/or ingestion of KI documentation will be maintained per existing Radiological Emergency Planning requirements.

c. Employee Evacuation. The primary protective action for GGNS employees during a security-based incident is to shelter in place. If Incident Command, in conjunction with nuclear power plant representatives, determines that employees should be evacuated, GGNS has procedures in place for the evacuation of their employees. The state, incident command, Grand Gulf, and the Claiborne County EOC will coordinate this protective action.

6. PUBLIC INFORMATION.

a. Overview.

(1) In a security-based incident, the rapid dissemination of accurate and timely information is vital for public safety and welfare and the preservation of human life. Information will be provided on actions the local government is taking in cooperation with the nuclear power plant, State, and Federal agencies and actions the public can take in response to a security-based incident. Communications will be available between the Command Post and the Emergency Operating Center (EOC) to secure the most current and accurate information on the situation for dissemination to the media. An official Public Information Officer (PIO) will be located in the Joint Information Center (JIC) and will communicate information and instructions to the public. He/she will maintain contact and exchange information through the public information system with all other agency/organization spokespersons that have been activated for emergency response.

(2) A JIC may be established near the ICP to facilitate press briefings or news releases. Multiple agencies and municipalities would be affected or involved in the response and/or recovery from a security-based incident and may have representatives at the JIC to coordinate the release of information. The State Emergency Operations Center (SEOC) will also host the state-level JIC for coordinated multiagency communications.

(3) A Joint Public Information Team may be formed to coordinate and authorize the release of all information relating to an incident. The SEOC PIO is responsible for working with the agency, organization spokespersons, or PIO located at the JIC to provide accurate, coordinated, and timely information to the affected audiences, including media, the private sector, and the public to inform them about the incident and its status, provide initial information, response efforts, counter speculation and rumors, and make available where necessary or known, immediate health and safety guidance, and recovery programs.

(4) The public information system is designed to communicate with a unified voice from

initial notification to final recovery. Information is coordinated and shared with the different agency/organization and jurisdictional authorities involved in the incident. This is to ensure mutual awareness and consistency in messaging and public instruction between all participants. Documentation of news releases will be maintained from mobilization through demobilization of the event.

b. Notification of the Public.

(1) In an emergency, the effective and timely warning of the public will be of utmost importance. Rapid and accurate public warning and the communication of information during and after a security-based incident is vital for saving lives and protecting property and the environment.

(2) Mississippi authorities will initially maintain contact with Grand Gulf Nuclear Station to obtain the most current and accurate information. Sirens are the primary activation point for the public notification system to provide warning and direction to the public in the primary emergency planning zone. The public notification system provides coverage for the entire ten-mile radius around the nuclear power plant, such that the resident and transient population can be notified by the sounding of the sirens and through the Emergency Alert System (EAS) with television and radio announcements. The siren system may be activated by Claiborne County and Tensas Parish EOCs based on the initial recommendation of the nuclear power plant.

(3) In the event a back-up means of notification is necessary, Claiborne County EMA shall, in conjunction with Law Enforcement implement Back-Up Route Alerting as required.

c. Functional Needs/Special Populations. A process is in place to notify people with Functional Needs/ Disability in Claiborne County. This process will be utilized if necessary.

Annex Q (Definitions and Acronyms)

1. DEFINITIONS. This list of definitions is not intended to be all-inclusive. Other definitions may appear within this plan where they are used.

a. ***Access Control Point*** – A pre-designated location manned by county or state law enforcement to prevent entry into the risk area during an accident. These points will be located on or immediately beyond the perimeter of the risk area.

b. ***ALARA*** – Acronym referring to the practice of keeping radiation exposure As Low As Reasonably Achievable.

c. ***Alert*** – An Emergency Classification Level where events are in progress or have occurred which indicate an actual or potential degradation of the level of safety of the plant or a security event that involves probable life-threatening risk to site personnel or damage to site equipment because of intentional malicious efforts of a hostile act. Any releases of radioactive material are expected to remain on-site and to be limited to small fractions of the EPA PAG exposure levels.

d. ***American Red Cross (ARC)*** – A quasi-governmental agency providing for the relief of suffering and welfare activities in a disaster. The ARC operates under a Congressional Charter and is supported by contributions.

e. ***Area Command*** - An organization established (1) to oversee the management of multiple incidents that are each being handled by an ICS organization or (2) to oversee the management of large or multiple incidents to which several Incident Management Teams have been assigned. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources according to priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed. Area command becomes Unified Area Command when incidents are multi-jurisdictional. Area Command may be established at an EOC facility or some locations other than ICP.

f. ***Background Radiation*** – Ionizing radiation from within the body and from the natural environment to which individuals are always exposed.

g. ***Branch Tactical Planning*** - Branch Tactical Planning means that detailed action plans are developed within the Operations Section at the Branch level with the Planning Section providing support. Branch Tactical Planning is implemented when no one set of objectives is pertinent to the entire incident, special technical expertise is needed for planning and it is not otherwise feasible to prepare and distribute the Incident Action Plan.

h. ***CBRN Response Emergency Response Force Package (CERFP)*** **-** To provide immediate CBRN incident response capabilities to the governor including incident site search of collapsed buildings and structures, conducting rescue tasks to extract trapped casualties, providing mass decontamination, performing medical triage and initial treatment to stabilize patients for transport to medical facilities by the Incident Commander, and the recovery of CBRN incident fatalities.

i. ***Civil Support Team (CST)*** - To support civil authorities at a domestic Chemical, Biological, Radiological and Nuclear high-yield Explosives (CBRNE) incident site by identifying CBRNE agents/substances, assessing current or projected consequences, advising on response measures, and assisting with appropriate requests for additional follow-on state and federal military forces. Units can also provide immediate response for intentional and unintentional CBRN or hazardous material (HAZMAT) releases and natural or manmade disasters that result in, or could result in, catastrophic loss of life or property.

j. ***Committed Dose Equivalent (CDE)*** – A measurement of the radiation dose received by an organ assessed both from an external effective dose and from the committed dose to the affected organ. The thyroid dose is measured as CDE.

k. ***Congregate Care Center*** - a facility for temporary housing, care, and feeding of evacuees.

l. ***Contaminated Injured*** – A person who is contaminated and otherwise physically injured, or contaminated and exposed to dangerous levels of radiation, or a person who is exposed to dangerous levels of radiation.

m. ***Contamination*** – Radioactive material on the surfaces of structures, areas, objects, or personnel.

n. ***Critical Infrastructure / Key Resources (CI/KR)*** - Systems, resources, and networks, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and resources would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.

o. ***Decontamination*** – The reduction or removal of radioactive material from a structure, area, object, or person.

p. ***Decontamination Center*** - A location with shower facilities and a large parking area used to monitor evacuees for radiological contamination and to decontaminate evacuees and their belongings, if necessary. Several of these centers may be established on the periphery of the hazard area. They may also act as reception centers.

q. ***Decontamination Survey*** – The process by which persons and vehicles are monitored to determine the presence and/or level of contamination. Such surveys will be performed with the use of Portal Monitors, Geiger-Mueller Survey Meters, or similar devices.

r. ***Dose Rate*** – The amount of radiation which an individual can potentially receive per unit of time.

s. ***Dosimeter*** – Also called a self-reading dosimeter (SRD), it visually indicates a person's exposure to radiation over a specified period.

t. ***Emergency Alert System (EAS)*** – Radio and/or TV Stations which have been authorized by the Federal Communications Commission to operate in a controlled manner during an emergency.

u. ***Emergency Classification Levels (ECL's)*** – The nuclear power plant operator is required to classify the accident according to the establishing classification system, i.e., Unusual Event, Alert, Site Area Emergency, or General Emergency. State and local emergency response organizations will use this classification system as a basis for emergency actions per the appropriate emergency operations plan.

v. ***Emergency Operations Center (EOC)*** – The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., Federal, State, regional, city, tribal) or some combination thereof.

w. ***Emergency Operations Facility (EOF)*** – A facility operated by a fixed nuclear facility to evaluate and control emergencies and coordinating responses.

x. ***Emergency Planning Zone (EPZ)*** **-** The area around a nuclear facility for which planning is required to assure that prompt and effective action will be taken to protect the public in the event of an accident. A primary EPZ (the plume exposure pathway) will consist of all cities, villages, and townships within approximately a 10-mile radius of the facility within which procedures for shelter and evacuation are major concerns. A secondary EPZ (the ingestion exposure pathway) will consist of all counties, inclusive of the jurisdictions they encompass, within approximately a 50-mile radius of the facility within which procedures for monitoring food and water contamination are major concerns. The principal exposure from this pathway would be from the ingestion of contaminated water or foods, such as milk, livestock feed, or fresh vegetables. The

time of potential exposure could range in duration from hours to months. The EPZ is divided into protective action areas to simplify the communication of evacuation orders to the public.

y. ***Emergency Worker*** – An individual who has an essential mission within the Plume Exposure Pathway 10-mile EPZ to protect the health and safety of the public who could be exposed to ionizing radiation from the plume on its deposition.

z. ***Emergency Worker Decontamination Station*** **-** A specific location designed for the decontamination of emergency workers and their equipment separate from the general public.

aa. ***Evacuation*** – The orderly movement of people from a potential radiological hazard to areas outside the 10-mile EPZ.

bb. ***Evacuation Time Estimate (ETE)*** – The estimated time needed to evacuate the public from affected areas of the plume exposure pathway EPZ.

cc. ***Exposure*** – A measure of the ionization produced in air by X-ray or gamma radiation. Roentgen (R) is a unit of exposure. The term **dose**, sometimes used interchangeably with exposure, actually refers to absorbed radiation.

dd. ***Federal Radiological Monitoring and Assessment Center (FRMAC)*** **-** is a federal asset available on request by the Department of Homeland Security (DHS) to respond to nuclear and radiological incidents as described in the National Response Framework (NRF). FRMAC is an interagency organization with representatives from various federal, state, and local radiological response organizations. The purpose of the FRMAC is to assist the states, local and tribal governments in their mission to protect the health and well-being of their citizens with verified radiation measurements; interpretations of radiation distributions based on Environmental Protection Agency (EPA), Food and Drug Administration (FDA), or local Protective Action Guidelines; and characterization of overall radiological conditions.

ee. ***Field Monitoring Team (FMT)*** – A team of specifically trained first responders dispatched to the plume or ingestion exposure pathway EPZ at the time of an accident to perform radiological environmental sampling and surveys.

ff. ***Fixed Nuclear Facility (FNF)*** – A stationary nuclear installation that uses or produces radioactive materials in its normal operations. FNF refers to a commercial nuclear power plant in this plan.

gg. ***FLEX Strategy*** – Based on the event and lessons learned at the Fukushima Daiichi plant in Japan, after reaffirming a framework to respond to Fukushima Daiichi and creating a

basis for action, the nuclear energy industry developed a diverse, flexible approach to implement the lessons from Fukushima Daiichi. Its purpose is to prepare for the extended loss of AC power (ELAP) and loss of ultimate heat sink (LUHS) on Beyond Design Basis External Events (BDBEE).

hh. ***General Emergency (GE)*** – An Emergency Classification Level indicating events are in process or have occurred which involve actual or imminent substantial core degradation or melting of reactor fuel with the potential for or actual loss of containment integrity or Hostile Action that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA PAG exposure levels offsite for more than the immediate site area.

ii. ***Host County*** – Generally, a county outside the plume exposure pathway EPZ of a fixed nuclear facility, through prior agreement, will provide resource support to a Risk county in the event of an accident.

jj. ***Hostile Action*** – an act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes an attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.

kk. ***Incident Command Post*** - The field location at which the primary tactical-level, on-scene incident command functions are performed. The ICP may be collocated with the incident base or other incident facilities and is normally identified by a green rotating or flashing light.

ll. ***Incident Commander*** - The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site

mm. ***INFORM Software*** **–** Electronic off-site communication system using secure internet ports to deliver emergency event notification. The notification forms are originated from the Control Rooms or Emergency Operation Facilities.

nn. ***Ingestion Exposure Pathway*** – The area surrounding a fixed nuclear facility where the principal exposure from an accident would be from the ingestion of contaminated water or foods. An area around a fixed nuclear facility with a radius of approximately 50 miles.

oo. ***Initial Notification*** – The first notification by a fixed nuclear facility to state and local agencies and the Nuclear Regulatory Commission of one of the four-event classifications.

pp. ***Internal Radiation*** – Radiation (alpha and beta particles and gamma radiation) resulting from radioactive substances in the body. Important sources are iodine 131 in the thyroid gland, and strontium 90 and plutonium 239 in bone.

qq. ***Ionizing Radiation*** – Any radiation capable of displacing electrons from atoms, thereby, producing ions (i.e. radiation produced by X-ray equipment).

rr. ***Joint Information Center (JIC)*** – A facility established to coordinate all incident-related public information activities. It is the central point of contact for all news media at the scene of the incident. Public information officials from all participating agencies should collocate at the JIC. All public information releases are made by a "Joint Public Information Team" (JPIT) that is made up of representatives from local, state, and federal government, and the utility.

ss. ***Licensee*** – Holder of or applicant for a license to operate a fixed nuclear facility.

tt. ***Local Government*** – The legal governing body of any county, municipality, or subdivision of the state. For this plan, the term **local** will refer to offices or agencies of county government and any organization functioning within the county and having an emergency response role.

uu. ***Millirem (mRem)*** – One-thousandth of a Rem; the measurement is generally used to describe natural background exposure to radiation.

vv. ***Milliroentgen (mR)*** – One thousandth of a Roentgen; 1000 milliroentgen equals one Roentgen.

ww. ***Monitor and Prepare –*** A protective action recommendation that allows for families to unite and take appropriate actions to ready for evacuation readiness.

xx. ***National Warning System (NAWAS)*** – A full period, private line telephone system, used to convey warning of enemy attack or natural disaster to federal, state, and local governments, as well as the military and civilian population.

yy. ***Mississippi Wireless Information Network (MSWIN)*** – Radio communications system employed by the state of Mississippi EOC.

zz. ***Notification of Unusual Event (NOUE)*** – An Emergency Classification Level indicating events are in process or have occurred which indicate potential degradation in the level of safety of the nuclear power plant or indicate a security threat to the facility. Protection has been initiated. Events are in process or have occurred which indicate a potential degradation of the level of safety

of the plant or indicate a security threat to facility protection. No releases of radioactive material requiring an offsite response or monitoring are expected.

aaa. ***Offsite*** – Anything outside the exclusion area of a fixed nuclear facility (outside the boundary of the onsite area).

bbb. ***Offsite Response Organization*** - Local, State, and Federal agencies/organizations outside the Owner Controlled Are that may respond to an incident at the nuclear power plant.

ccc. ***Onsite*** – Anything inside the exclusion area of a fixed nuclear facility (within the FNFs boundaries).

ddd. ***Owner Controlled Area*** - This is all the company property immediately surrounding the protected area's security fence. Access is normally limited to people on official business.

eee. ***Plume*** – Generally a gaseous atmospheric release from a fixed nuclear facility, in an accident or emergency, may contain radioactive noble gases and volatile solids.

fff. ***Plume Exposure Pathway*** – The process by which people are directly exposed to radiation. The principal exposures from this pathway would be whole-body external exposure to gamma radiation from the plume and deposited materials and inhalation exposure from the passing plume. The duration of principal exposures could range in length from hours to days. The EPZ for this pathway consists of an area of about a 10-miles radius around a fixed nuclear facility.

ggg. ***Portal Monitor*** – A stand-alone whole-body personal contamination monitor. The FEMA standard for the detection capability in a portal monitor is one microcurie of Cesium 137.

hhh. ***Precautionary Transfer*** – The movement of specifically targeted population groups, such as special needs populations and school children, relocating them early as a means of easing traffic congestion and limiting exposure before any release of radioactive material.

iii. ***Projected Dose*** – A calculated or estimated dose which the population at risk may potentially receive as a result of an accident if protective actions are not taken.

jjj. ***Protected Area*** - This is the area inside the security fence. All of this area can be considered "the nuclear power plant." You must have a badge issued to you by Security to go into the Protected Area.

kkk. ***Protective Action*** – A specific action that may be taken to minimize or eliminate a hazard to the health and safety of people within a risk area. Protective actions identified in this

plan are access control, sheltering, monitoring, and preparing evacuation and respiratory protection, which may be implemented individually or in combination.

lll. ***Protective Action Areas (PAA)*** – An area within the plume exposure pathway EPZ where the implementation of protective action or actions may be deemed necessary at the time of an accident.

mmm. ***Protective Action Guide (PAG)*** – Projected radiological dose or dose commitment values to individuals in the general population that warrant taking protective action.

nnn. ***Protective Action Recommendation (PAR)*** – Advice to the state on emergency measures it should consider in determining action for the public to take to avoid or reduce their exposure to radiation.

ooo. ***Protective Response*** – The implementation of a protective action or combination of protective actions by governmental agencies at the time of an accident to eliminate or reduce radiation exposure to the public.

ppp. ***Rad (Radiation Absorbed Dose)*** – the unit of measurement for energy deposited in any material from any form of radiation.

qqq. ***Radiation*** – Gamma rays, x-rays, alpha and beta particles, high-speed electrons, protons, neutrons, and other nuclear particles; as well as, electromagnetic radiation consisting of associated and interacting electric and magnetic waves.

rrr. ***Radiation Dose*** – The quantity of radiation absorbed by the body or any portion of the body without regard for the type of radiation.

sss. ***Radiation Exposure Record*** – The card issued to emergency workers for recording their radiation exposure readings from an SRD.

ttt. ***Radioactive Materials*** – Materials containing atoms having excess energy. It contains excited, unstable atoms that are disintegrating, emitting radiation.

uuu. ***Radio Amateur Civil Emergency Service (RACES)*** – An emergency service using the vast reservoir of skilled radio amateurs throughout the nation per approved emergency management communications plans; whereby, radio amateurs participating in these plans operate during an emergency or emergency condition.

vvv. ***Radiological Monitor*** – An individual trained to measure, record, and report radiation

exposure and exposure rates, provide limited field guidance on radiation hazards associated with operations to which he is assigned, and perform operator's maintenance on radiological instruments.

www. ***Radiological Monitoring*** – The use of sampling and radiation detection equipment to determine the levels of radiation in an area or on an individual.

xxx. ***Rapidly Progressing Severe Accident*** – A significant reactor event with immediate or near-immediate offsite radiological consequences.

yyy. ***Reception Center*** – A pre-designated site outside the plume exposure pathway EPZ at which evacuees will be registered, monitored for contamination, decontaminated if necessary, and directed to shelters if desired.

zzz. ***Recovery*** – Short-term recovery operations seek to restore vital services to the community and provide for the basic needs of the public. Long-term recovery focuses on restoring the community to its normal or improved, state of affairs.

aaaa. ***Rem (Roentgen Equivalent Man)*** – The unit of measurement for energy deposited in a human body that accounts for the differences in the radiation's effect on living tissue.

bbbb. ***Respiratory Protection*** – Those actions taken at the time of an accident intended to minimize the inhalation of airborne contamination.

cccc. ***Risk County*** – A county located within the plume exposure pathway EPZ of a fixed nuclear facility.

dddd. ***Roentgen (R)*** – A unit of radiation exposure determined by the amount of ionization produced in air.

eeee. ***Shelter Facility*** – A facility established outside the plume exposure pathway EPZ at the time of an accident to provide food, shelter, and medical care on a short or long-term basis for persons evacuating the risk area.

ffff. ***Sheltering In Place*** – Action taken by the public to protect against radiological exposure which includes remaining indoors, closing doors and windows, and decreasing building ventilation during and following the passage of a radioactive plume.

gggg. ***Siren Tone*** – A three-to-five minute steady tone, sounded strictly at the option and on the authority of state government officials. The signal may be activated for natural or man-made

disasters as local and state authorities may determine and may also be used to call attention to essential emergency information. The use of the sirens must be accompanied by a public explanation and instructions to the public over local Emergency Alert Stations (EAS).

hhhh. ***Site Area Emergency (SAE)*** – An Emergency Classification Level indicating events are in process or have occurred that result in actual or likely major failures of nuclear power plant functions needed for the protection of the public or Hostile Action that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to likely failure of, or (2) that prevent effective access to the equipment needed for the protection of the public. Releases are not expected to exceed EPA PAG exposure levels beyond the site boundaries.

iiii. ***Spontaneous Evacuation*** – A type of evacuation in which residents leave their homes or the area on their own, without receiving any prior warning.

jjjj. ***Staging Area*** - Location established where resources could be placed while awaiting a tactical assignment. The Operations Section manages Staging Areas.

kkkk. ***Standard Operating Procedures (SOP)*** – A set of instructions having the force of a directive, covering those features of operations which lend themselves to a definite or standardized procedure without loss of effectiveness.

llll. ***Survey Meter*** – A portable instrument used in radiological monitoring to detect and measure ionizing radiation.

mmmm. ***Thermo Luminescent Dosimeter (TLD)*** – A dosimetry badge used to measure exposure to ionizing radiation.

nnnn. ***Thyroid Blocking Agent*** – A chemical compound is taken to prevent or reduce the absorption by the thyroid of radioiodine. Potassium iodide (KI) is the typical blocking agent.

oooo. ***Thyroid Exposure*** – Exposure of the thyroid gland to radioactive isotopes of iodine which have been either inhaled or ingested. Exposure to the thyroid is measured in CDE.

pppp. ***Total Effective Dose Equivalent (TEDE)*** – A measurement of radiation dose received based upon the total direct gamma exposure to the whole body from external sources (Effective Dose Equivalent-EDE) and the dose commitment one will incur from the inhalation of radionuclides (Committed Effective Dose Equivalent-CEDE). The EDE and CEDE added together to give the TEDE.

qqqq. ***Traffic Control Point*** – A pre-designated location manned by county or state law

enforcement to facilitate the efficient movement of traffic through a specific area.

rrrr. ***Voice/Telecommunication Device for the Deaf (V/TDD)*** – A typewriter-like device that allows hearing-impaired persons to communicate by telephone.

ssss. ***Warning Point*** – A facility that receives warnings and activates the public warning system in its area of responsibility.

tttt. ***Waste Isolation Pilot Plant (WIPP)*** – "WIPP" is the abbreviation for the Waste Isolation Pilot Plant, a U.S. Department of Energy (DOE) facility in southeastern New Mexico, 26 miles southeast of Carlsbad.

uuuu. ***WebEOC*** - WebEOC is a web-based information management system that provides a single point for the collection and dissemination of emergency or event-related information. WebEOC provides real-time information as provided by the users and can be used during the planning, mitigation, response, and recovery phases of any emergency. WebEOC helps share a common operating picture between the State Emergency Operations Center (SEOC), local counties, other state agencies, and our federal partners through single-source software.

vvvv. ***Whole Body Exposure*** – An exposure of the human body to radiation, in which the entire body rather than an isolated part is exposed to ionizing radiation. The head and trunk are considered equivalent to an exposure of the entire human body. Whole-body exposure is measured in TEDE.

2. ACRONYMS – This list of acronyms is not intended to be all-inclusive. Other acronyms may appear within this plan.

ACP – Access Control Point
ALARA – As Low as Reasonably Achievable
ANS – Alert Notification System
ARC – American Red Cross
ARCA – Area Recommended for Corrective Action
ARFI – Areas Recommended for Improvement
CBRN – Chemical, Biological, Radiological, Nuclear
CDC – Centers for Disease Control
CDE – Committed Dose Equivalent
CD/EMA – Civil Defense/Emergency Management Agency
CERFP – CBRN Emergency Response Force Package
COE – Corps of Engineers (Federal)
CST – Civil Support Team
DEQ – Department of Environmental Quality (State)

DHS – Department of Human Services
DMS – Department of Mental Health (State)
DOD – Department of Defense (Federal)
DOE – Department of Energy (Federal)
DOI – Department of the Interior (Federal)
DRD – Direct Reading Dosimeter
DRH – Division of Radiological Health, MSDH (State)
DWFP – Department of Wildlife, Fisheries, and Parks (State)
EAS – Emergency Alert System
ECL – Emergency Classification Level
EMS – Emergency Medical Services, MSDH (State)
EMT - Emergency Medical Technical
EOC – Emergency Operations Center
EOF – Emergency Operations Facility
EOP – Emergency Operations Plan
EPA – Environmental Protection Agency (Federal)
EPI – Emergency Public Information
EPZ – Emergency Planning Zone
ERAMS – Environmental Radiation Ambient Monitoring System
EWDS – Emergency Worker Decontamination Station
FAA – Federal Aviation Administration (Federal)
FBI – Federal Bureau of Investigation (Federal)
FD – Fire Department
FDA – Food and Drug Administration (Federal)
FEMA – Federal Emergency Management Agency (Federal)
FMT- Field Monitoring Team
FNF – Fixed Nuclear Facility
FRC – Federal Response Center
FRMAC - Federal Radiological Monitoring and Assessment Center
NRF – National Response Framework
FRMAC – Federal Radiological Monitoring and Assessment Center
GE – General Emergency
GGNS – Grand Gulf Nuclear Station
GM – Guidance Memorandum
GOHSEP – Governor's Office of Homeland Security and Emergency Preparedness (LA)
HAB – Hostile Action Based
HHS – Health and Human Services (Federal)
HUD – Housing and Urban Development (Federal)
ICP – Incident Command Point
ICS – Incident Command System

IEP – Ingestion Exposure Pathway
JOC – Joint Operations Center
JIC – Joint Information Center
JTF – Joint Task Force
KI – Potassium Iodide
LA-SAFE – Louisiana State Analytical & Fusion Exchange
LDEQ – Louisiana Department of Environmental Quality
LE – Law Enforcement
LEOC – Local Emergency Operations Center
LEPC – Local Emergency Planning Committee
LERN – Louisiana Emergency Response Network
LHLS/EP – Louisiana Office of Homeland Security and Emergency Preparedness
LSP – Louisiana State Police
LWIN – Louisiana Wireless Information Network
MBAH – Mississippi Board of Animal Health (State)
MCP – Mobile Command Point
MDAC – Mississippi Department of Agriculture and Commerce (State)
MDA/ED – Mississippi Development Authority/Energy Div. (State)
MDOT – Mississippi Department of Transportation (State)
MDHS – Mississippi Department of Human Services (State)
MEMA – Mississippi Emergency Management Agency (State)
MFC – Mississippi Forestry Commission (State)
MHP – Mississippi Highway Patrol (State)
MMD – Mississippi Military Department (State)
MREPP – Mississippi Radiological Emergency Preparedness Plan
MSDH – Mississippi State Department of Health (State)
MSU-ES – Mississippi State University – Extension Service (State)
NAWAS – National Warning System
NOAA – National Oceanic and Atmospheric Administration (Federal)
NIMS – National Incident Management System
NRC – Nuclear Regulatory Commission (Federal)
NOUE – Notification of Unusual Event
NUREG – Nuclear Regulation
NWS – National Weather Service (Federal)
OEM – Office of Emergency Management, MSDH (State)
OHP – Office of Health Protection, MSDH (State)
OPS – Operations
ORO – Offsite Response Organization
OHSEP – Office of Homeland Security and Emergency Preparedness
OSC – Operations Support Center

OSHA – Occupational Safety and Health Administration
PAA – Protective Action Area
PAG – Protective Action Guide
PAR – Protective Action Recommendation
PI – Public Information
PIO – Public Information Officer
RAAO – Radiological Accident Assessment Officer
RACES – Radio Amateur Civil Emergency Service
RAC – Radiation Assessment Coordinator
RAD – Radiation Absorbed Dose
RAP – Radiological Assistance Program
REM – Radiological Emergency Manager (GGNS)
REP – Radiological Emergency Program (State)
RBS – River Bend Nuclear Station
REAC/TS – Radiation Emergency Assistance Center/Training Site (Federal)
RECO – Radiation Exposure Control Officer
Rem – Roentgen Equivalent Man
REP – Radiological Emergency Preparedness
RERT – Radiological Emergency Response Team
RIMC – Radiological Instrument Maintenance and Calibration
RM – Radiological Monitor
RO – Radiological Officer
SAE – Site Area Emergency
SAIDG – State Agency Information Directors Group
SATNET – Satellite Network
SEOC – State Emergency Operations Center
SHO – State Health Officer
SIP – Shelter in Place
SMRAP – Southern Mutual Radiological Assistance Plan
SOP – Standard Operating Procedure
SRD – Self-Reading Dosimeter
TCP – Traffic Control Point
TEDE – Total Effective Dose Equivalent
TLD – Thermo Luminescent Dosimeter
TOC – Tactical Operations Center
USCG – United State Coast Guard (Federal)
USDA – United States Department of Agriculture (Federal)
VOAD – Voluntary Organizations Active in Disaster
WIPP – Waste Isolation Pilot Plant

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