Grand Gulf Nuclear Station

After Action Report/ Improvement Plan

Exercise Date – March 29, 2017

Radiological Emergency Preparedness (REP) Program

FEMA

June 15, 2017

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Grand Gulf Nuclear Station

After Action Report/Improvement Plan

Published *June 15, 2017*

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A. EXECUTIVE SUMMARY

On March 29, 2017, a Plume Phase Radiological Emergency Preparedness (REP) exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Grand Gulf Nuclear Station (GGNS) located in Port Gibson, Claiborne County, Mississippi. Personnel from the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA), Region VI, evaluated the exercise. The purpose was to assess the level of preparedness of state and local responders to react to a simulated radiological emergency at GGNS. This exercise was held in accordance with DHS/FEMA policies and guidance concerning the implementation of state and local radiological emergency preparedness plans and procedures. The previous exercise at this site was conducted on October 21, 2015. The qualifying emergency preparedness exercise was conducted in November 1981. There have been 18 evaluated exercises, including the exercise on March 29, 2017, plus several drills conducted since that time.

The DHS/FEMA Region VI Office wishes to acknowledge the efforts of the many individuals in the State of Louisiana, Tensas Parish, and surrounding jurisdictions who participated in this exercise. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants was evident during this exercise.

This report contains the final written evaluation of the Plume Phase exercise. The state and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There was one corrected Level 2 Finding and one Plan Issue identified during this exercise.

A. SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Grand Gulf Nuclear Station Plume Phase Exercise

Type of Exercise
Plume Phase

Exercise Date
March 29, 2017

Program
Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) Radiological Emergency Preparedness (REP) Program

Scenario Type
Rapid Escalation

1.2 Exercise Planning Team Leadership

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1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Grand Gulf Nuclear Station (R6) exercise:

State Jurisdictions

Louisiana Public Service Commission
Louisiana State Police
Louisiana Governor's Office of Homeland Security and Emergency Preparedness
Louisiana Department of Environmental Quality
Louisiana Department of Health
Louisiana Department of Transportation and Development
Louisiana Department of Wildlife and Fisheries
Louisiana Department of Agriculture and Forestry
Louisiana Department of Corrections
Louisiana Department of Children and Family Services

Risk Jurisdictions

Tensas Parish Office of Homeland Security and Emergency Preparedness
Department of Children and Family Services (DCFS)
LSU Agricultural Extension Services
Tensas Parish Fire Department
Tensas Parish Sheriff's Office
Tensas Parish Police Jury
Tensas Parish Office of Public Health
Department of Public Works
Tensas Parish Maintenance Department
Tensas Parish Council on Aging

Private Organizations

Grand Gulf Nuclear Station
KNOE Radio Station

Federal Organizations

Nuclear Regulatory Commission

A. SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region VI Radiological Emergency Preparedness staff evaluated a Plume Phase exercise on March 29, 2017 to assess the capabilities of state and local emergency preparedness organizations in implementing their Radiological Emergency Response Plans and procedures to protect the public health and safety during a radiological emergency involving Grand Gulf Nuclear Station (GGNS). The purpose of this report is to present the results and findings on the performance of the offsite response organizations during a simulated radiological emergency.

2.2 Exercise Objectives, Capabilities and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be exercised are discussed in the Exercise Plan (EXPLAN).

2.3 Scenario Summary

The exercise scenario was developed to evaluate the response of exercise participants to an incident involving a radiological release at the site, requiring evacuation of the public from the Louisiana portion of the 10-mile Emergency Planning Zone surrounding the Grand Gulf Nuclear Station. The exercise scenario provided for the evaluation of Tensas Parish, Louisiana Department of Environmental Quality and the Governor's Office of Homeland Security and Emergency Preparedness to test the ability of participants to formulate and implement protective action decisions.

A. SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the March 29, 2017 exercise evaluation to test the offsite emergency response capabilities of state and local governments in the 10-mile Emergency Planning Zone surrounding the Grand Gulf Nuclear Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in the exercise evaluation areas as outlined in the January 2016, Radiological Emergency Preparedness Manual. Detailed information on the exercise evaluation area criteria and the extent of play agreement used in this exercise are found in the attached EXPLAN.

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1 on the following page, presents the status of all exercise evaluation area criteria that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status is indicated by the use of the following letters:

M - Met (No Findings assessed and no unresolved Findings from prior exercise)

L1 - Level 1 Finding

L2 - Level 2 Finding

P - Plan Issue

N - Not Demonstrated

Table 3.1 – Exercise Evaluation – Criteria Met

Date: 03/29/2017 Site: Grand Gulf Nuclear Station (R6)		
Location	Criteria Title	Criteria
EAS-KNOE	Initial Alert & Notification	5a1
GOHSEP EOC	PADs	2b2
GOHSEP EOC	PARs	2b1
GOHSEP EOC	EW Exposure Control Decisions	2a1
GOHSEP EOC	Direction and Control	1c1
GOHSEP EOC	Communications Equipment	1d1
GOHSEP EOC	Equipment and Supplies	1e1
GOHSEP EOC	Mobilization	1a1
LDEQ EOF	PARs	2b1
LDEQ EOF	EW Exposure Control Decisions	2a1
LDEQ EOF	EW Exposure Control Implementation	3a1
LDEQ EOF	Direction and Control	1c1
LDEQ EOF	Facilities	1b1
LDEQ EOF	Equipment and Supplies	1e1
LDEQ EOF	Communications Equipment	1d1
LDEQ EOF	Mobilization	1a1
LDEQ HQ	Equipment and Supplies	1e1
LDEQ HQ	Communications Equipment	1d1
LDEQ HQ	Direction and Control	1c1
LDEQ HQ	Mobilization	1a1
Tensas Parish EOC	PAD Implementation Disabled/Functional Needs	3c1
Tensas Parish EOC	PADs for Disabled/Functional Needs	2c1
Tensas Parish EOC	KI Public/Institutionalized	3b1
Tensas Parish EOC	Tensas Academy	3c2
Tensas Parish EOC	Mobilization	1a1
Tensas Parish EOC	Subsequent Public Information	5b1
Tensas Parish EOC	Initial Alert & Notification	5a1
Tensas Parish EOC	PADs	2b2
Tensas Parish EOC	EW Exposure Control Decisions	2a1
Tensas Parish EOC	Direction and Control	1c1
Tensas Parish EOC	Impediments to Evacuation	3d2
Tensas Parish EOC	TACP Establishment	3d1
Tensas Parish EOC	EW Exposure Control Implementation	3a1
Tensas Parish EOC	Equipment and Supplies	1e1
Tensas Parish EOC	Communications Equipment	1d1

Note: This table does not include findings or plans issues. Findings and plan issues are addressed in the narrative for each location.

3.3 Criteria Evaluation Summaries

3.3.1 State Jurisdictions

In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:

a. LEVEL 1 FINDINGS: NONE
b. LEVEL 2 FINDINGS: NONE
c. PLAN ISSUES: NONE
d. PRIOR ISSUES – RESOLVED: NONE
e. PRIOR ISSUES – UNRESOLVED: NONE

3.3.2 Risk Jurisdictions

In summary, the status of DHS/FEMA criteria for the Risk jurisdiction is as follows:

a. LEVEL 1 FINDINGS: NONE

b. LEVEL 2 FINDINGS:

Location:	Tensas Parish Emergency Operations Center
Issue Number:	28-17-3a1-L2-1
Condition:	The Tensas Parish Emergency Operations Center Radiological Defense (RADEF) Officer followed his checklist; however, he lacked sufficient training in issuing dosimetry and providing a radiological briefing to Emergency Workers (EWs). The RADEF Officer also referenced an outdated procedure (Attachment C, Dosimetry Kit Instructions, Revision 1) instead of the more current Rev 2 dated October 17, 2015.
Possible Cause:	Lack of sufficient training in providing and issuing dosimetry briefing and equipment to Emergency Workers. Lack of familiarity with procedures.
Reference:	NUREG-0654/FEMA-REP-1, K.3.a; K.5.b; Tensas Parish Radiological Defense (RADEF) Officer Procedure (Rev.2), Attachment C, dated October 17, 2015.
Effect:	Improper radiological briefing and lack of instructions provided to the EW could result in the EW exceeding administrative exposure limits due to a lack of

		understanding on how to properly wear the DOSE-GUARD Electronic self-reading dosimeter. Lack of understanding of how to operate the equipment and lack of knowledge on where to return dosimetry and exposure control card at the completion of their shift could result in improper documentation of exposure records. Additionally, the RADEF Officer did not provide instructions to the EW as to when and who would make the recommendation for ingesting Potassium Iodide (KI).
	Corrective Action:	On the spot correction occurred through training and re-demonstration of providing dosimetry and a radiological briefing to the EW.
c.	PLAN ISSUES:	
	Location:	Tensas Parish Emergency Operations Center
	Issue Number:	28-17-3a1-P-2
	Condition:	The Tensas Parish Emergency Response Procedure for the Radiological Defense (RADEF) Officer provides that all EWs will be issued a permanent record Thermoluminescent Dosimeter (TLD). The Homeland Security Director clarified that the intent of the procedure was to provide a TLD when emergency workers leave the facility. Current guidance requires that all emergency workers be provided permanent record dosimetry such as a TLD. During the exercise it was noted that the Ludlum Survey Meters to be used to monitor people entering the Emergency Operations Center were not deployed. The plans and procedures are not very clear on when to deploy the meters nor is it clear about exactly where in the facility the meters will be positioned.
	Possible Cause:	Plans and procedures are vague on when to issue TLDs or survey meters within the Emergency Operation Center.
	Effect:	Possible legal record of exposure may not be available. Contamination may be brought into the Emergency Operations Center

Recommendation:	Update plans and procedures to provide clear direction for use of exposure control and radiation monitoring equipment.

d. PRIOR ISSUES – RESOLVED: NONE
e. PRIOR ISSUES – UNRESOLVED: NONE

3.3.4 Private Jurisdictions

3.3.4.1 Emergency Alert System Radio Station KNOE

In summary, the status of DHS/FEMA criteria for the private jurisdiction is as follows:

a. LEVEL 1 FINDINGS: NONE
b. LEVEL 2 FINDINGS: NONE
c. PLAN ISSUES: NONE
d. PRIOR ISSUES – RESOLVED: NONE
e. PRIOR ISSUES – UNRESOLVED: NONE

SECTION 4: CONCLUSION

This report contains the final written evaluation of the Plume Phase exercise. The state and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There was one corrected Level 2 Finding and one Plan Issue identified as a result of this exercise. Based on exercise results, the offsite radiological emergency preparedness for the State of Louisiana and the affected local jurisdictions are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite plans and preparedness for the State of Louisiana, site-specific to Grand Gulf Nuclear Station, will remain in effect.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 28-17-3a1-L2-1	Criterion: 3a1
ISSUE: The Tensas Parish Emergency Response Procedure for the Radiological Defense Officer provides that all Emergency Workers will be issued a permanent record Thermoluminescent Dosimeter (TLD). The Homeland Security Director stated that the Emergency Operations Center staff would be issued a TLD upon leaving the facility. Current guidance requires that all emergency workers be provided with permanent record dosimetry such as a TLD. During the exercise it was noted that the Ludlum Survey Meters to be used to monitor people entering into the Emergency Operations Center were not deployed. The plans and procedures are not clear on when to deploy the meters.	
RECOMMENDATION: Update plans and procedures to provide clear direction for use of exposure control and radiation monitoring equipment.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY: Emergency Operations Center Management	PRIMARY RESPONSIBLE AGENCY: Tensas Parish Office of Homeland Security and Emergency Preparedness
CAPABILITY ELEMENT: Planning	START DATE: 3/29//2017
AGENCY POC: Rick Foster, Homeland Security Director	ESTIMATED COMPLETION DATE: 3/29/2018

APPENDIX B: EXERCISE TIMELINE

Facility: Grand Gulf Nuclear Station (R6)	
Emergency Classification Level or Event	Time Utility Declared
Unusual Event	N/A
Alert	N/A
Site Area Emergency	0824
General Emergency	1016
Simulated Rad. Release Started	1006
Simulated Rad. Release Terminated	N/A
Governor Declared State of Emergency	1030
Exercise Terminated	1246
PAD1: Evac 2mile radius/5mile in sectors L, M, N Monitor and Prepare in remainder of EPZ.	1048
Siren Activation #1	1055
EAS Message #1	1100
KI Administration Decision	Interview

APPENDIX C: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 03/29/2017

SITE: Grand Gulf Nuclear Station

LOCATION	TEAM LEADER	AGENCY
EAS Radio Station KNOE	Tim Pflieger	FEMA Region 6
Grand Gulf Nuclear Station Joint Information Center	Linda Gee	FEMA Region 6
Louisiana Department of Environmental Quality EOF	Timothy Pflieger	FEMA Region 6
Louisiana Department of Environmental Quality Headquarters	Scott Flowerday	FEMA Region 6
Louisiana Department of Environmental Quality FMT 1	Paul Ward	FEMA HQ
Louisiana Department of Environmental Quality FMT 2	Kenneth Wierman	FEMA HQ
Louisiana Emergency Operations Center	Elsa Lopez	FEMA Region 6
Tensas Parish Emergency Operations Center	Brad DeKorte	FEMA Region 6

LOCATION	EVALUATOR	AGENCY
Louisiana Department of Environmental Quality EOF	Jeff Clark	FEMA Region 7
Tensas Parish Emergency Operations Center	Barbara Thomas	FEMA Region 1
Tensas Parish Emergency Operations Center	Taneeka Hollins	FEMA Region 1

APPENDIX D: ACRONYMS AND ABBREVIATIONS

AAC - Accident Assessment Coordinator
ARCA - Area Requiring Corrective Actions
CPM – Counts per Minute
CS - Company Spokesperson
DAC – Dose Assessment Coordinator
DHS/FEMA – Department of Homeland Security/Federal Emergency Management Agency
DOTD – Department of Transportation and Development
DPS – Department of Public Safety
EAS - Emergency Alert System
ECL - Emergency Classification Level
EMD - Emergency Management Director
EOC - Emergency Operations Center
EOF - Emergency Operations Facility
EOP – Extent of Play
EP - Emergency Preparedness
EPA - Environmental Protection Agency
EPC - Emergency Preparedness Coordinator
EPD – Electronic Personal Dosimeter
EPZ - Emergency Planning Zone
ESF - Emergency Support Function
EW - Emergency Workers
EXPLAN – Exercise Plan
FMT – Field Monitoring Team
FTC – Field Team Coordinator
GE - General Emergency
GGNS - Grand Gulf Nuclear Station
GOHSEP – Governor's Office of Homeland Security and Emergency Preparedness
GPS – Global Positioning System
HOO – Headquarters Operations Officer
JIC - Joint Information Center
KI – Potassium Iodide
LDEQ – Louisiana Department of Environmental Quality
LDH – Louisiana Department of Health
LPIO – Louisiana Public Information Officer
LSU - Louisiana State University
MEMA – Mississippi Emergency Management Agency
MSWIN – Mississippi Wireless Information Network
NMF – Notification Message Forms
ORO- Offsite Response Organization
OSL - Optically Stimulated Luminescent

PAD - Protective Action Decision
PAG - Protective Action Guide
PAR - Protective Action Recommendation
PAS - Protective Action Sections
PIO - Public Information Officer
PJP - Police Jury President
PPE – Personal Protective Equipment
PRD – Permanent Record Dosimeter
RAC – Radiation Area Coordinator
RADEF – Radiological Defense
RASCAL – Radiological Assessment System for Consequence Analysis
REDAM - Radiological Emergency Dose Assessment Model
REP - Radiological Emergency Preparedness
RO – Radiological Officer
SAE - Site Area Emergency
SEL – Senior EOF Liaison
SHO - State Health Officer
SITREP – Situation Report
T/ACP – Traffic and Access Control Points
TLD – Thermoluminescent Dosimeter
Tensas Parish EOC – Tensas Parish Emergency Operations Center
Tensas Parish HSD – Tensas Parish Homeland Security Director
UCG - Unified Command Group
UE - Unusual Event
UMR – Unified Mobilization Roster
URI – Unified RASCAL Interface
VOIP – Voice Over Internet Protocol

APPENDIX E: EXERCISE PLAN

Grand Gulf Nuclear Station Extent of Play

2017

Revision 3

April 24, 2017

REVISION LOG

#	Date	Revision
0	12/16/2016	Initial Release
1	1/24/2017	Standardize GOHSEP to Louisiana State EOC; Change 1.b.1 facility to Ferriday Reception Center; Add Tensas Parish T/ACP to 1.e.1; Change all "ARCAs' to 'Level 2 Findings'; Specify need for interview with special transportation provider; Change School to Tensas Academy; Remove Louisiana SEOC from 5.a.1 and 5.b.1; Minor editorial corrections;
2	3/21/2017	Specify that LDEQ JIC team begins at 7:00 AM; Remove Reception Center and Congregate Care evaluation due to postponement
3	4/24/2017	Remove **Criterion 5.a.3**, route alerting

ASSESSMENT AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654/FEMA- REP-1, A.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; H.3, 4)

Locations

Louisiana State Emergency Operations Center (SEOC), Louisiana Department of Environmental Quality (LDEQ) Headquarters (LDEQ HQ), LDEQ Emergency Operations Facility (EOF), Joint Information Center (JIC), Tensas Parish EOC

Extent of Play

a. LDEQ players will be pre-staged at the Courtyard by Marriott in Vicksburg, Mississippi or at LDEQ Headquarters.

b. Subject to scenario and time constraints, LDEQ will begin fully mobilizing as early as NOUE and begin deploying as early as ALERT.

c. The LDEQ Public Information Officer (PIO), LDEQ PIO Support, GOHSEP PIO, and Tensas Parish PIO will be pre-deployed or en route to the JIC at the Mississippi Emergency Management Agency (MEMA) prior to receipt of the first message. LDEQ PIO team may begin sign out/ operational checks at 7:00 AM and proceed to JIC upon completion.

d. LDEQ Field Teams may begin operational checks and other aspects of mobilization prior to receipt of first message, at 7:30 AM.

e. Upon completion of operational checks, LDEQ Field Teams will proceed to Tensas Parish EOC Parking lot, from which they will be deployed remotely, as if at the LDEQ Northeast Regional Office.

f. Offsite Response Organizations in Louisiana will not be evaluated for mobilization and response to simulated events in Mississippi other than a nuclear power plant accident, such as WIPP or PRND related events.

Level 2 Findings – None

Sub-element 1.c - Direction and Control

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG-0654/FEMA-REP-1, A.1.d; A.2.a, b; A.3; C.4, 6)

Locations

Louisiana SEOC, LDEQ HQ, LDEQ EOF, Tensas Parish EOC

Extent of Play

Offsite Response Organizations in Louisiana will not be evaluated for mobilization and response to simulated events in Mississippi other than a nuclear power plant accident, such as WIPP or PRND related events.

Level 2 Findings – None

Sub-element 1.d - Communications Equipment

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654/FEMA-REP-1, F.1, 2)

Locations

Louisiana SEOC, LDEQ HQ, LDEQ EOF, LDEQ Field Monitoring Team 1 (FMT 1), LDEQ FMT 2, JIC, Tensas Parish EOC

Extent of Play

a. The LDEQ Contract Radiation Laboratory will not be evaluated in this exercise, and any communication with it will be simulated.

b. Communications to the Southern Mutual Radiation Assistance Plan (SMRAP) states, except for TX and AR, will be simulated.

c. Correction-on-the-spot will be considered at these locations at the

discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction-on-the-spot at the Tensas EOC is limited to areas outside the operations area (i.e., emergency worker briefings and issue of dosimetry in other rooms).

Level 2 Findings – None

Sub-element 1.e - Equipment and Supplies to Support Operations

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654/FEMA- REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b)

Locations

Louisiana SEOC, LDEQ HQ, LDEQ EOF, LDEQ FMT 1, LDEQ FMT 2, JIC, Tensas Parish EOC, Tensas Parish T/ACP

Extent of Play

a. LDEQ FMTs will not don anti-contamination suits during the exercise. Anti-contamination suits are available in field team kits. Proper donning and doffing techniques will be demonstrated by one member of each team either prior to deployment or following termination of the exercise. FMTs will don gloves and booties during the exercise.

b. Used charcoal cartridges will be utilized instead of silver zeolite cartridges for air sampling.

c. Dosimetry and KI are not applicable at the JIC.

d. Simulated TLDs will be used in place of spare OSL or TLD badges when applicable.

e. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction-on-the-spot at the Tensas Parish EOC is limited to areas outside the operations area (i.e., emergency worker briefings and issue of dosimetry in other

rooms).

Level 2 Findings – None

ASSESSMENT AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a - Emergency Worker Exposure Control

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG- 0654/FEMA-REP-1, C.6; J.10.e, f; K.3, 4)

Locations

Louisiana SEOC, LDEQ EOF, Tensas Parish EOC

Extent of Play

a. If the scenario does not warrant a discussion on the authorization to administer KI, then the criteria shall be accomplished through an interview with the evaluator.

b. If the scenario does not warrant a discussion on emergency worker (EW) exposure exceeding administrative limits, then the criteria shall be accomplished through an interview with the evaluator.

Note: Parish decision-makers receive recommendations for KI and EW exposure from the Louisiana SEOC.

Level 2 Findings – None

Sub-element 2.b. - Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.1: Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654/FEMA-REP-1,

I. 10 and Supplement 3)

Locations

Louisiana SEOC, LDEQ EOF

Extent of Play

a. The LDEQ EOF controller may inject simulated field monitoring data to the Dose Assessment Coordinator for the purpose of dose projection validation and verification through back calculations.

b. RadResponder Network will be used during the exercise as part of the ongoing transition toward its permanent use, but LDEQ will not be evaluated on the use of RadResponder.

Level 2 Findings – None

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654/FEMA-REP-1, A.3; C.4, 6; D.4; J.9; J.10.e, f, m)

Locations

Louisiana SEOC, Tensas Parish EOC

Extent of Play

According to the State of Louisiana's policy, KI is not considered for the general public.

Level 2 Findings – None

Sub-element 2.c. - PAD Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

Criterion 2.c.1: Protective action decisions are made, as appropriate, for groups of persons

with disabilities and access/functional needs. (NUREG-0654/FEMA-REP-1, D.4; J.9; J.10.d, e)

Locations

Tensas Parish EOC

Extent of Play

If the scenario does not warrant a discussion on protective action decisions for the protection of persons with disabilities and access/functional needs, then the criteria shall be accomplished through an interview with the evaluator.

Level 2 Findings – None

ASSESSMENT AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a - Implementation of Emergency Worker Exposure Control

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/ procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, K.3.a, b; K.4)

Locations

LDEQ EOF, LDEQ FMT 1, LDEQ FMT 2, Tensas Parish EOC, Tensas Parish T/ACP, Tensas Parish School Board

Extent of Play

c. TLD/OSLs will be available for all emergency workers. Simulated TLDs will be used in place of spare OSL or TLD badges when applicable.

d. Traffic and Access Control Points personnel will be located at the Tensas Parish EOC, where they will demonstrate the criteria via interview.

e. Area dosimetry may be used at the Tensas Parish EOC

f. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction-on-the-spot at the Tensas EOC is limited to areas outside the operations area (i.e., emergency worker briefings and issue of dosimetry in other rooms).

Level 2 Findings – None

Sub-element 3.b. - Implementation of KI Decision for Institutionalized Individuals and the General Public

Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals is maintained. (NUREG-0654/FEMA-REP-1, J.10.e, f)

Locations

Tensas Parish EOC

Extent of Play

a. If the scenario does not warrant a discussion on protective action decisions for the protection of special populations, then the criteria shall be accomplished through an interview with the evaluator.

b. If the scenario does not warrant a discussion on KI decisions, then the criteria will be accomplished through an interview with the evaluator.

c. According to the State of Louisiana's policy, KI is not considered for the general public.

d. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure

that exercise play is not interrupted. Correction-on-the-spot at the Tensas EOC is limited to areas outside the operations area (i.e., emergency worker briefings and issue of dosimetry in other rooms).

Level 2 Findings – None

Sub-element 3.c. - Implementation of Precautionary and/or Protective Actions for Persons with Disabilities and Access/Functional Needs

Criterion 3.c.1: Precautionary and/or protective action decisions are implemented for persons with disabilities and access/functional needs other than schools within areas subject to protective actions. (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g)

Locations

Tensas Parish EOC

Extent of Play

a. The EOC will demonstrate the capability to alert and notify special population facilities, special populations and individuals according to plans and procedures, as applicable, and it will be accomplished through a discussion.

b. A transportation provider for special populations/facilities will be available for interview.

c. Contact with a special facility will be simulated.

Level 2 Findings – None

Criterion 3.c.2: OROs/School officials implement precautionary and/or protective actions for schools. (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g)

Locations

Tensas Parish EOC, Tensas Academy Private School

Extent of Play

a. Criterion will be demonstrated by discussion with the school official at the Tensas Parish EOC or nearby location. A bus driver will also be available for interview. Discussion may also include a transportation official.

b. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted. Correction-on-the-spot at the Tensas EOC is limited to areas outside the operations area (i.e., emergency worker briefings and issue of dosimetry in other rooms).

Level 2 Findings – None

Sub-element 3.d. – Implementation of Traffic Access Control C

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654/FEMA- REP-1, A.3; C.1, 4; J.10.g, j)

Locations

Tensas Parish EOC, Tensas Parish T/ACP

Extent of Play

a. This may be demonstrated out of sequence.

b. One traffic and access control staff will demonstrate knowledge of their roles and responsibility by discussion with the evaluator. The discussion will be at or near the EOC. Travel to the traffic and access control point will not be demonstrated.

c. If the scenario does not warrant this discussion, the controller will inject data to simulate a discussion.

d. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction-on-the-spot at the Tensas EOC is limited to areas outside the operations area (i.e., emergency worker briefings and issue of dosimetry in other

rooms).

Level 2 Findings – None C

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654/FEMA-REP-1, J.10.k)

Locations

Tensas Parish EOC, Tensas Parish T/ACP, JIC

Extent of Play

a. Transfer of information to the JIC is demonstrated to evaluator at Tensas Parish EOC

b. A controller inject will be used to initiate the demonstration for this criterion. The inject will occur during the evacuation and it will be on an evacuation route. It will trigger the re-routing with the JIC in order to communicate the alternate route to evacuees that are leaving the area. No implementation will actually occur; the situation and solution will be discussed in the Tensas Parish EOC.

Level 2 Findings – None

ASSESSMENT AREA 4: FIELD MEASURMENT AND ANALYSES

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.2: Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG- 0654/FEMA-REP-1, C.1; H.12; I.7, 8, 11; J.10.a)

Locations

LDEQ EOF

Extent of Play

The LDEQ EOF controller may inject simulated field monitoring data to the Dose Assessment Coordinator for the purpose of dose projection validation and verification through back calculations.

Level 2 Findings – None

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654/FEMA-REP-1, C.1; H.12; I.8, 9; J.10.a)

Locations

LDEQ FMT 1, LDEQ FMT 2

Extent of Play

a. Used charcoal cartridges instead of silver zeolite will be used for air sampling.

b. RadResponder Network will be used during the exercise as part of the ongoing transition toward its permanent use, but LDEQ will not be evaluated on the use of RadResponder.

c. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.

Level 2 Findings – None

ASSESSMENT AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a - Activation of the Prompt Alert and Notification System

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the

public must include as a minimum the elements required by current REP guidance. (NUREG-0654/FEMA-REP-1, E.5, 6, 7)

Locations

Tensas Parish EOC
KNOE Radio Station, 1109 Hudson Lane, Suite C, Monroe, LA 71201

Extent of Play

a. The alert and notification system (ANS) activation procedure will be demonstrated up to the point of activation. The siren activation will be simulated.

b. The mutual capability of Tensas Parish and Claiborne County to activate each other's sirens will not be demonstrated during this exercise.

c. Out of Sequence – A Staff Assisted Visit (SAV) to the KNOE Radio Station will be performed at 11:00 AM on March 28, 2017.

Level 2 Findings – None

Sub-element 5.b - Subsequent Emergency Information and Instructions for the Public and the Media

Criterion 5.b.1: OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner. (NUREG- 0654/FEMA-REP-1, E.5, 7; G.3.a, G.4.a, c)

Locations

JIC, Tensas Parish EOC

Extent of Play

a. Utility, State, and Parish representatives will demonstrate the ability to provide emergency information and instructions to the public consistent

with the scenario.

d. News media will not be present. Selected personnel will simulate the role of reporters asking questions during briefings.

e. Controllers will inject public phone team messages, media phone team messages and news briefing messages.

f. Rumor control will be demonstrated at the JIC.

g. All subsequent messages disseminated by the Louisiana SEOC will be announced by the GOHSEP representative at the JIC.

Level 2 Findings – None

GENERAL EXTENT-OF-PLAY (EOP):

e. With regard to last minute additions or changes to any previously approved Extent-of- Play, all suggested changes must be forwarded to the RAC Chair for approval.

f. The goal of all offsite response organizations (ORO) is to protect the health and safety of the public. This goal is achieved through the execution of appropriate plans and procedures. It is recognized that situations may arise that could limit the organizations in the exact execution of these plans and procedures.

g. In the event of an unanticipated situation, OROs are permitted to exercise flexibility in the implementation of their plans and procedures in order to successfully achieve the objective of protection of public health and safety and protection of the environment.

h. As a statement of fact, no ORO will deliberately deviate from its

plans and procedures with the intent of avoiding responsibility.

REFERENCES:

Radiological Emergency Preparedness Program Manual - FEMA P-1028 / January 2016

Scenario

Tuesday, March 28, 2017

11:00 AM	KNOE Radio Station Walk-through 1109 Hudson Lane, Suite C, Monroe, LA
2:00 PM	State controller meeting Vicksburg Hampton Inn (1st Floor Conference Room)
3:00 PM	FEMA Pre-exercise Evaluator Briefing Vicksburg Hampton Inn (1st Floor Conference Room)

Wednesday, March 29, 2017

7:00 AM	Pre-staging Operational Checks/Sign-out for LDEQ JIC Team
7:30 AM	Pre-staging Operational Checks/Sign-out for LDEQ Field Teams Courtyard Marriott, Vicksburg, MS
8:00 AM	Grand Gulf Nuclear Station (GGNS) Evaluated Exercise LDEQ HQ, Baton Rouge, LA Louisiana State Emergency Operations Center (EOC), Baton Rouge, LA. Tensas Parish EOC (TPEOC), St. Joseph, LA Joint Information Center (JIC), Pearl, MS GGNS Emergency Operations Facility (EOF), Port Gibson

Thursday, March 30, 2017

9:00 AM	Federal/State/Local Exercise Summary Meeting Tensas Parish EOC
11:00 AM	Public Meeting Tensas Parish Police Jury Meeting Room, St. Joseph, LA

SCENARIO NARRATIVE

This scenario is a Rapid Escalation Exercise, designed to generate a Site Area Emergency, with further escalation to a General Emergency as the highest classification. The scenario is not a Rapidly Progressing Severe Accident.

A supplemental PRND terrorism/WIPP transportation accident scenario will begin around 0630 in Mississippi. This simulated event will not be part of play in Louisiana and will not affect the primary GGNS accident scenario. It will end around 0759. This will involve a simulation that anti-nuclear protesters are at GGNS from 700 until 800.

The GGNS scenario begins at 0800 in a Division 2 work week at 100% reactor power.

At 0805, a recirculation pipe will fail initiating a Loss of Coolant Accident (LOCA) in the drywell. Drywell pressure will exceed 1.39 pounds per square inch gauge (PSIG) almost instantly, indicating a loss of the Reactor Coolant System (RCS) Fission Product Barrier according to RC1 on the Fission Product Barrier Matrix.

The running Primary Containment and Auxiliary building ventilation dampers fail to close upon isolation signal, which results in a loss of the Primary Containment (PC) Fission Product Barrier according to PC3.1 on the Fission Product Barrier Matrix. The reactor should SCRAM at 0810.

The Containment Vent radiation monitor fails, which will cause future releases to be unmonitored. Various injection systems fail to operate.

By 0820 a Site Area Emergency (SAE) is declared. SAE notification should go out by 0835. EOF Lead Offsite Liaison arrival is delayed.

Entergy JIC staff and Mock Media begin play at 0900

At 0950, a Feedwater A line break occurs, causing reactor water level to go below -191 inches, which is an actual loss of the Fuel Clad Fission Product Barrier according to FC2 on the Fission Product Barrier Matrix.

By 1005, an unmonitored, unfiltered, Core Damage radioactivity release to the environment begins, with the release path being the open Containment Ventilation system. Releases are unmonitored and expected to exceed EPA PAGs near the site.

By 1005 a General Emergency (GE) is declared. GE notification should go out by 1020.

Repair efforts are expected to work to address the challenges of restoring water to the reactor

and isolating the release path. These efforts will begin to succeed around 1235.

The Exercise is expected to terminate at approximately 1245.