

2014



# Turkey Point and Key Lime Radiological Full Scale Exercises

## After Action Report/Improvement Plan

This After Action Report and Improvement Plan captures the observations made by exercise participants with detailed analysis, recommended corrective actions and confirmed improvement plan corrective actions resulting from the Turkey Point Nuclear Power Plant Exercise conducted February 6, 2014, and Key Lime Radiological Full Scale Exercise, held February 7, 2014.

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**Rick Scott**

Governor

**John H. Armstrong, MD, FACS**  
Surgeon General and Secretary of Health



The \_\_\_\_\_ After Action Report and Improvement Plan is in compliance with Homeland Security's Exercise and Evaluation Program (HSEEP) and will be used to enhance future Department of Health response plans, trainings, exercises, and event responses.

Adopted on \_\_\_\_\_

By: \_\_\_\_\_

## HANDLING INSTRUCTIONS

1. The title of this document is the Key Lime Radiological Full Scale Exercise After Action Report/Improvement Plan.
2. This is a public document – no special handling instructions are required.
3. For more information, please consult the following points of contact (POCs):

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## SECTION 1: EXERCISE OVERVIEW

<b>Exercise Name(s)</b>	<b>Turkey Point Off Year Exercise Key Lime Radiological Full Scale Exercise</b>
<b>Type of Exercise</b>	<b>Full Scale Exercise</b>
<b>Exercise State Date</b>	<b>February 6<sup>th</sup>, 2014</b>
<b>Exercise End Date</b>	<b>February 7<sup>th</sup>, 2014</b>
<b>Location</b>	<b>Florida Department of Health, Tallahassee, FL Florida Department of Health in Monroe County Florida Power and Light; Miami, FL</b>
<b>Sponsor</b>	<b>Florida Division of Emergency Management</b>
<b>Mission Area(s)</b>	<b>Response</b>
<b>Capabilities</b>	<b>Operational Coordination Public Health and Medical Services</b>
<b>Scenario Type</b>	<b>Radiological</b>

## SECTION 2: EXERCISE DESIGN SUMMARY

### Purpose

The purpose of this exercise was to evaluate the Florida Division of Emergency Management and State Emergency Response Team's (SERT) response capabilities to a radiological release at the Turkey Point Nuclear Power Plant in Miami, Florida, which is owned and operated by Florida Power and Light (FPL). FPL's Emergency Operations Facility (EOF) was activated for day one of the exercise, in conjunction with the Turkey Point Nuclear Power Plant Facility, and the State Watch Office in the State Emergency Operations Center (SEOC). The Miami-Dade and Monroe County Emergency Operations Centers were concurrently activated to support this exercise. On day two of the exercise, a Community Reception Center (CRC) was activated at the Murray E. Nelson Government Center with a potassium iodide (KI) Point of Distribution (POD). The exercise was used to train and acquaint new employees and existing SERT members on their mission-essential emergency support functions. Additionally, a discussion-based component was exercised to review and advise the Emergency Support Function 17 (ESF-17) Animal Decontamination Plan.

### Scope

The exercise extended over the course of two days, February 6 – 7, 2014. The Florida Department of Health intended to use the opportunity to exercise the core capabilities of Operational Coordination and Public Health and Medical Services. The State Emergency Operations Center simulated a Level 1 Activation with participation from the State Watch Office and the Florida Department of Health Central Office Logistics Staffing Unit, while local coordination facilitated participation within Region 7. Previous coordination with the State ESF-8 Staffing Unit facilitated the ability to roster multiple strike teams as well as initiate a real deployment of the Medical Reserve Corps.

### Core Capabilities

#### Operational Coordination

1. Establish and maintain partnership structures among protection elements to support networking, planning, and coordination.
2. Mobilize all critical resources and establish command, control, and coordination structures within the affected community and other coordinating bodies in surrounding communities throughout the duration of the incident.

#### Public Health and Medical Services

1. Deliver medical countermeasures to exposed populations.
2. Complete triage and initial stabilization of casualties and begin definitive care for those likely to survive their injuries.

## Objectives

The Key Lime Radiological Full Scale Exercise planning team selected objectives that focused on evaluating emergency response procedures, identifying areas for improvement, and achieving a collaborative attitude. This exercise focused on the following objectives:

**Objective 1:** Determine if public health issues are recognized and addressed in order to minimize the collective impact of the accident on the overall population.

**Objective 2:** Demonstrate a short-term medical response that effectively minimizes the combined effects of acute care and potential radiation exposures. This includes providing ESF-8 staff and FDOH in Monroe County (county health department staff) for the Community Reception Center.

## Major Strengths

- State ESF-8 demonstrated the ability to roster and staff strike teams and a POD team.
- Coordination of Florida Medical Reserve Corps (MRC) participation was extensive to include Radiation Response Volunteer Corps (RRVC) training prior to execution, flexibility in participation roles throughout the exercise, and maintaining a level of realism to include wearing tyvek suits for play.
- The Florida Department of Health participated in the Animal Decontamination Workshop in conjunction with local, state, and federal partners during day two of the exercise, the first workshop of its kind to integrate state and local entities.

## Primary Areas of Improvement

- 'Typing' in strike team mission requests required clarification, indicating a gap in the existing document published on the FDOH Bureau of Preparedness and Response website.
- The extent of play was not clearly defined for participating units.

## Scenario Summary

The Turkey Point Off Year Exercise and the Key Lime Radiological Exercise were sponsored by the Florida Division of Emergency Management, Technical Hazards Unit.

This was a two day exercise that began with a plume release incident, quickly escalating into a General Emergency at the Turkey Point Nuclear Power Facility in Miami, Florida on February 6, 2014. The State Assistance Team (SAT), along with the FDOH Bureau of Radiation Control (BRC) jointly participated in the exercise at the Emergency Operations Facility (EOF) in Miami, Florida. The exercise scenario was designed to escalate to a General Emergency on day one at the Turkey Point Nuclear Power Plant, which resulted in the simulated release of radioactive material into the atmosphere. This simulated release threatened public safety with dangerous levels of exposure from a plume of radioactive material traveling down-wind from the plant. This triggered the response for day two, to open a Community Reception Center (CRC) to triage, monitor, decontaminate and shelter evacuees from designated affected areas.

FDOH-Monroe County and the Bureau of Radiation Control (BRC) supported the activation of a Community Reception Center (CRC) at the Murray Nelson Government Center in Key Largo. FDOH-Monroe County stood up the Point of Distribution (POD) for potassium iodide (KI), and the BRC supported monitoring of survivors to determine radiation levels.

Resource requests came through for an additional POD, as well as the need for Environmental Health, Epidemiology, Behavioral Health and Special Needs Strike Teams, and Medical Reserve Corps (MRC) volunteers in support of the local CRC. Prior to the exercise, Monroe County identified that staffing an entire CRC would exhaust local capability and facilitated the incorporation of activating strike teams. Additionally, Monroe County determined household pets were likely to present with owners at the CRC for assessment and appropriate processing. Monroe County also identified, prior to the exercise, that local capabilities would be unable to address this specific need and requested ESF-17, state level staffing unit activation and processing requests for strike teams, and equipment to support this component of the response.

## SECTION 3: ANALYSIS OF CORE CAPABILITIES

This section of the report reviews the performance of the exercised capabilities, activities and tasks. In this section observations are organized by core capability.

### Operational Coordination

**Objective 1: Determine if public health issues are recognized and addressed in order to minimize the collective impact of the accident on the overall population.**

**Activity 1.1 Establish and maintain partnership structures among protection elements to support networking, planning, and coordination.**

#### Strengths

**Observation 1.1.1:** Florida Department of Health’s Public Information Officer participated in at least three press conferences in support of the State Assistance Team (SAT) on day one of the exercise.

#### Reference: Crisis and Emergency Risk Communications Annex (CERC)

**Analysis:** The FDOH Public Information Officer (PIO) was successfully integrated into FPL’s Joint Information Center / Joint Information System (JIC/JIS) by participating in at least three mock press conferences with partner agencies in support of the SAT. Local journalism students from two universities served as “mock media” reporters, and posed direct and realistic questions that effectively tested the capabilities of the FDOH and partner response PIOs. This approach (use of journalism students) should be duplicated throughout these and other types of exercises. Harness partnerships with colleges, universities to engage students who may decide after participation in the exercise that they would like to explore the field of public health, emergency management and/or public information. A number of students expressed interest after the exercise, and spoke with the FDOH and other PIOs about potential career opportunities.

#### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1.1.2:** FDOH PIO immediately experienced equipment, internet, air card, VPN issues upon arrival at FPL’s EOF and Emergency News Center (ENC).

**Reference: None**

**Analysis:** The FDOH PIO did not receive the access information for the assigned computer from the ENC before the day of the exercise and found out after the fact that the ENC IT does not allow use of jump-drives (all FDOH public health messaging templates were on this drive). The PIO did have paper copies of all documents to use as templates and was able to save document(s) on the ENC personal computer to assist in development/completion of FDEM news release drafts for review, with dissemination as appropriate. The inability to fully use assigned laptop, printer and jump drive with messaging templates to support FDOH PIO field efforts creates an unnecessary delay in the dissemination of public information. Note: FDEM normally arrives at the EOF the day before the exercise and does a test of the communication equipment. This would have included IT portals and tools. Because of prior travel concerns, DOH Communications did not conduct pre exercise test(s).

**Recommendations:**

1. Ensure all participants have documentation stored on transferable devices that are approved by FPL's IT support group who are providing the equipment.
2. Continue use of redundant methods for storage.
3. Continue training and exercising of FDOH PIO in radiological incidents.

**Activity 1.2 Mobilize all critical resources and establish command, control, and coordination structures within the affected community and other coordinating bodies in surrounding communities throughout the duration of the incident.**

**Strengths**

**Observation 1.2.1:** Prompt response to mission requests by Logistics Staffing Unit.

**Reference: State ESF-8 SOP**

**Analysis:** Upon receipt of mission details there was a prompt response provided by regional points of contact and central office Logistics Staffing Unit. Five out of six missions were completed prior to ENDEX with continuous updates on EM Constellation that included by name rosters.

**Observation 1.2.2:** Mission details were comprehensive making execution successful.

**Reference: State ESF-8 SOP**

**Analysis:** Staffing requests sent by the Logistics Staffing Unit were comprehensive and included the required detail to execute the missions and also provided opportunity for central office Logistics Staffing to cross train on alternate procedures.

**Observation 1.2.3:** Animal Decontamination Workshop Participation.

**Reference: Radiological/Nuclear Incident Emergency Response Plan**

**Analysis:** ESF-8 (to include MRC Volunteers, DOH staff, and a HHS representative) participated in the Animal Decontamination Workshop led by FDEM providing comprehensive advice for incorporation into the ESF-17 Animal Decontamination Plan. The public health footprint in this area of radiological response is larger than initially estimated by both ESF-8 and ESF-17. Clear authority for regulations regarding human health (responder safety, client safety, etc.) should be established in the plan going forward, i.e. responder Personal Protective Equipment (PPE) and minimal training requirements. It was clear during the workshop that much is unknown regarding the impact of radiological fallout on animals and the possibility of a clear and ongoing threat to public health. ESF-8 needs to continue to actively engage in these discussions with ESF-17 to encourage further collaboration and to continue to assess quality of response efforts.

### **Areas for Improvement**

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1.2.4:** Extent of play was not clearly defined.

#### **Reference: None**

**Analysis:** Staff had questions related to the extent of play during the exercise. Throughout the exercise there were questions regarding how far into the staffing process to execute. The State ESF-8 Logistics Section Chief made direct contact with the exercise controller to confirm that points of contact were intended to call the individuals on the staffing roster. Local participants were not provided with a complete roster of who was participating during the exercise and the roles and responsibilities were not clearly defined. Additionally, some responders were unclear on check-in procedures, the signage was not distinct, and a shortage of staff was observed.

#### **Recommendations:**

1. Develop detailed instructions for staff that encompasses the expectations of participants (i.e. ExPlan, C/E Handbook for the individual agency separate from the sponsor agency).
2. Verify staff has received instructions prior to the execution of the exercise.
3. Train and exercise with partner agencies.

**Area for Improvement 1.2.5:** Clarification on 'Typing' for Strike Teams.

#### **Reference: Team Typing Matrices; State ESF-8 SOP**

**Analysis:** During the staffing event, clarification of specialty team's roster was requested. As an example a 'Type I' Special Needs Sheltering Team was not available as outlined in the published Team Typing Matrices located on the BPR website. This caused confusion between staffing and the staffing points of contact because the definition of 'types' is unclear. Additionally, it was noted that some of the staffing points of contact have changed.

### **Recommendations:**

1. Review current Team Typing Matrices and determine best course of action (add to Responder Management Plan).
2. Training for ESF-8 Staff related to Team Typing Matrices.
3. Quarterly validate the Staffing Regional Points of Contact list. \*Consider validating the Division Points of Contact.

## **Public Health and Medical Services**

**Objective 2: Demonstrate a short-term medical response that is effective and minimizes the combined effects of acute care and potential radiation exposures to include providing ESF-8 staff and FDOH-Monroe (County Health Department Staff) for the Community Reception Center.**

**Activity 2.1 Deliver medical countermeasures to exposed populations.**

### **Strengths**

**Observation 2.1.1:** MRC activation and pre-exercise coordination.

**Reference: State ESF-8 SOP**

**Analysis:** Florida MRC volunteers were activated and attended the exercise from three MRC Units within Region 7. Junior MRCs attended the exercise as an approved field trip. MRC Volunteers donned tyvek suits that were provided by a partner agency (FDEM). MRC Volunteers assisted with the monitoring station, pet decontamination station, registration and acted as simulated victims. Many MRC volunteers completed Radiation Response Volunteer Corps [RRVC] prior to the exercise. MRC Volunteers worked alongside American Red Cross volunteers at the bus transportation station.

**Observation 2.1.2:** MRC demonstration of capability in CRC.

**Reference: State ESF-8 SOP**

**Analysis:** MRC volunteers demonstrated an adaptive capability to participate as both responder and victim in the same exercise during two operational periods (40 victim roles).

**Observation 2.1.3:** MRC opportunity for recruitment.

**Reference: None**

**Analysis:** Key Lime Radiological Exercise aided in the recruitment of prospective MRC volunteers and increased awareness of the Florida MRC Network Program and the expanded capabilities of MRC volunteers.

## SECTION 4: CONCLUSION

The Turkey Point Nuclear Power Plant exercise provided greater exposure of a critical relationship between the Radiation Officer from the FDOH Bureau of Radiation Control and the ESF-8 representative on the State Assistance Team (SAT). The presence of the Radiological (RAD) team and the SAT helped educate partner agencies on the importance of the identified support roles. The deployment of the FDOH Public Information Officer also proved that public health is self-sustaining in that not only are personnel experienced, well versed, and exceptionally capable of public information response, but also a viable and critical capability to have during a nuclear power plant incident.

The Key Lime Radiological exercise established a baseline of capabilities and identified gaps to improve those capabilities. The FDOH-Monroe County demonstrated the ability to mobilize and stand up a Point of Distribution (POD) for potassium iodide (KI) in support of a Community Reception Center (CRC). Public health provided relevant volunteers from the Medical Reserve Corps (MRC), who became essential in the success of the exercise. The value of incorporating the MRC warranted recognition by partner agencies of the full potential of resources available in the public health community. The benefits which come from partnering with other agencies were also clear in the discussion component of the exercise that addressed animal decontamination, which provided ESF-17 and other external partners a snapshot of how public health influences other plans, policies and procedures to ensure the best response during an emergency. The State ESF-8 also demonstrated the ability to provide support to a county health department through the process of staffing and simulated deployment of strike teams. Although some gaps were identified, the exercise was successful in showing where opportunities for growth in local and state relationships can mature, as well as highlighting collaborative efforts with external partners.

Exercise strengths, dedication, expertise and experience are the characteristics that will drive public health responders to overcome obstacles and the uncertainty typical of a disaster environment. The FDOH-Monroe County, Medical Reserve Corps, and State ESF-8 participation in both the Turkey Point Nuclear Power Plant exercise and the Key Lime Radiological exercise demonstrated an overall strength in preparedness of the Florida Department of Health to continue assisting the public during radiological hazards.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Completion Date
<b>Operational Coordination</b>	1.1.2: FDOH PIO immediately experienced equipment, internet, air card, VPN issues upon arrival at FPL's EOF and Emergency News Center (ENC).	Ensure all participants have documentation stored on transferable devices that are approved by FPL's IT support group who are providing the equipment.	Planning	Training and Exercise Unit	Lead Exercise Planner	7/15/2014	9/30/2014
		Continue use of redundant methods for storage.	Planning	Training and Exercise Unit	Lead Exercise Planner	7/15/2014	9/30/2014
		Continue training and exercise of FDOH PIO in radiological incidents.	Training, Exercise	Crisis and Risk Communications Unit	Communications Manager	7/15/2014	9/30/2014
		Ensure all partner agencies have prior coordination for exercise development to establish command and control elements.	Exercise	Training and Exercise Unit	Lead Exercise Planner	7/15/2014	9/30/2014

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Completion Date
		Train and exercise with partner agencies.	Training, Exercise	Training and Exercise Unit	Training and Exercise Unit Manager	7/15/2014	7/1/2015
	1.2.4: Extent of play was not clearly defined.	Develop detailed instructions for staff that encompasses the expectations of participants (i.e. ExPlan, C/E Handbook for the individual agency separate from the sponsor agency).	Exercise	Training and Exercise Unit	Lead Exercise Planner	7/15/2014	7/1/2015
		Verify staff has received instructions prior to the execution of the exercise.	Exercise	Training and Exercise Unit	Lead Exercise Planner	7/15/2014	7/1/2015
		Train and exercise with partner agencies.	Training, Exercise	Training and Exercise Unit	Training and Exercise Unit Manager	7/15/2014	7/1/2015
	1.2.5: Clarification on 'Typing' for Strike Teams.	Review current Team Typing Matrices and determine best course of action (add	Planning	Medical Logistics	Responder Management Program Manager	7/15/2014	1/1/2015

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Primary Responsible Organization	Organization POC	Start Date	Completion Date
		to Responder Management Plan).					
		Training for ESF-8 Staff related to Team Typing Matrices.	Training	Medical Logistics	Responder Management Program Manager	7/15/2014	1/1/2015
		Quarterly validate the Staffing Regional Points of Contact list. *Consider validating the Division Points of Contact.	Exercise	Medical Logistics	Responder Management Program Manager	7/15/2014	7/1/2015

<b>Exercise Participants</b>		
<b>Turkey Point Full Scale Exercise – Day One by Corresponding Facilities</b>		
<b>Local</b>		
Miami-Dade EOC	Monroe County EOC	Key Largo Volunteer Ambulance
Agricultural and Cooperative Extension	Tavernier Volunteer Fire Department	Ocean Reef Public Safety
National Park Service	Key Largo Fire Rescue	FDEM Region 7 Coordinator
U.S. Coast Guard	Florida Highway Patrol	Florida Fish and Wildlife
Permitting, Environment and Regulatory Affairs	FDEM Region 6 Coordinator	FDEM Regional Supervisor
American Red Cross	City of Homestead HARB	Miami-Dade School Police
Miami-Dade Corrections	Florida City	Cutler Bay
Miami Mayor’s Office of Communications	Florida Department of Law Enforcement	FDOH-Monroe FDOH-Region 7 Emergency Response Advisor
<b>State SERT and FDEM</b>		
Florida Division of Emergency Management	FDOH Bureau of Radiation Control	Florida Department of Agriculture
Florida Power and Light	Florida Department of Health	FDOH PIO
<b>Key Lime Radiological Exercise – Day Two</b>		
<b>Local</b>		
Florida Department of Health in Monroe County Monroe County Fire Rescue	American Red Cross Monroe County EM – (logistics support)	Medical Reserve Corps FDOH-Region 7 Emergency Response Advisor and Region 7 Hospital Liaison (EMTRAC)
<b>State</b>		
Florida Department of Law Enforcement	Florida Department of Agriculture	Florida Division of Emergency Management
FDOH Bureau of Radiation Control	Florida Department of Environmental Protection	
<b>Federal</b>		
Department of Health and Human Services		

Acronym	Definition
<b>A</b>	
AAR	After Action Report
<b>B</b>	
BRC	Bureau of Radiation Control
<b>C</b>	
CERC	Crisis and Emergency Risk Communications Annex
Comms	Communications
CRC	Community Reception Center
<b>D</b>	
DECON	Decontamination
<b>E</b>	
EM	Emergency Management
ENC	Emergency News Center
ENDEX	End of Exercise
ESF	Emergency Support Function
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
Etc	Etcetera
<b>F</b>	
FDEM	Florida Division of Emergency Management
FDOH	Florida Department of Health
FL	Florida
FPL	Florida Power and Light
<b>H</b>	
HIPAA	Health Insurance Portability and Accountability Act
HHS	(Department of) Health and Human Services
<b>I</b>	

IMT	Incident Management Team
IP	Improvement Plan
IT	Information Technology
<b>J</b>	
JIC	Joint Information Center
JIS	Joint Information System
<b>K</b>	
KI	Potassium Iodide
<b>M</b>	
MRC	Medical Reserve Corps
<b>P</b>	
PIO	Public Information Officer
POC	Point of Contact
POD	Point of Distribution
PPE	Personal Protective Equipment
<b>R</b>	
RAD	Radiological
RadEx	Radiological Exercise
RRVC	Radiation Response Volunteer Corps
<b>S</b>	
SAT	State Assistance Team
SEOC	State Emergency Operations Center
SERT	State Emergency Response Team
SOP	Standard Operating Procedure
STARTEX	Start of Exercise
<b>V</b>	
VPN	Virtual Private Network