COORDINATING: South Carolina Emergency Management Division

SUPPORTING: South Carolina Department of Transportation; South Carolina Department of Administration; State Fiscal Accountability Authority; South Carolina Department of Labor, Licensing, and Regulation; South Carolina Department of Social Services; South Carolina Department of Health and Environmental Control; Office of Regulatory Staff; South Carolina Law Enforcement Division; South Carolina Department of Public Safety; Clemson University Livestock and Poultry Health; South Carolina National Guard; South Carolina Department of Commerce; South Carolina Intelligence and Information Center (SCIIC); South Carolina Critical Infrastructure Cybersecurity (SC CIC) Task Force.

I. INTRODUCTION

A. The following incident scenarios are used as a tool to facilitate preparedness planning:

1. Nuclear Detonation - 10-Kiloton Improvised Nuclear Device
2. Biological Attack - Aerosol Anthrax
3. Biological Disease Outbreak - Pandemic Influenza
4. Biological Attack - Plague
5. Chemical Attack - Blister Agent
6. Chemical Attack - Toxic Industrial Chemicals
7. Chemical Attack - Nerve Agent
8. Chemical Attack - Chlorine Tank Explosion
9. Natural Disaster - Major Earthquake
10. Natural Disaster - Major Hurricane
11. Radiological Attack - Radiological Dispersal Device
12. Explosives Attack - Bombing Using Improvised Explosive Devices
13. Biological Attack - Food contamination
14. Biological Attack - Foreign Animal Disease (Foot-and-Mouth Disease)
15. Cyber Attack

B. Executive summaries for each scenario provide guidance for initial disaster intelligence when not much about the incident is known.

C. This Annex does not include Scenarios 3, 9, 10, and 15 because the South Carolina Emergency Response Plan (SCEOP) contains detailed, comprehensive plans to address Pandemic Influenza [see Annex 2 (Pandemic Influenza) to Appendix 14 (SC Infectious Disease Plan)], Hurricanes [see Appendix 1 (SC Hurricane Plan)], Earthquakes [see Appendix 3 (SC Earthquake Plan)], and Cyber Attacks [see Appendix 16 (Cyber Incident Consequence Management Plan)].

II. EXECUTIVE SUMMARIES

10 Kiloton Uranium Improvised Nuclear Device

Casualties	111,967 fatalities
Infrastructure Damage	Massive damage in a 1-3 mile area
Evacuations/Displaced Persons	Will vary widely. Many citizens impacted by the initial exposure to radiation will shelter-in place and/or may be contained in the area to prevent contamination of other areas.
Contamination	Long-term within 30-50 miles
Economic Impact	Hundreds of millions of dollars
Potential for Multiple Events	No
Recovery Timeline	Years, in some areas potentially never

Biological Attack – Aerosol Anthrax

Casualties	10,000 fatalities
Infrastructure Damage	Minimal, other than contamination
Evacuations/Displaced Persons	Not likely
Contamination	Extensive (at site of attack)

Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Weeks

Biological Attack – Plague

Casualties	3,000 fatalities
Infrastructure Damage	None
Evacuations/Displaced Persons	Possible
Contamination	Several hours duration
Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Weeks

Chemical Attack – Blister Agent

Casualties	Over 100 fatalities
Infrastructure Damage	Minimal
Evacuations/Displaced Persons	More than 80,000
Contamination	Structures affected
Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Weeks or months

Toxic Chemical Attack

Casualties	137 fatalities
Infrastructure Damage	50% of structures in area of explosion
Evacuations/Displaced Persons	50,000 are asked to shelter-in-place
Contamination	10,000 are evacuated
Economic Impact	70,000 self-evacuate
Potential for Multiple Events	Yes
Recovery Timeline	Billions of dollars

Nerve Agent Attack

Casualties	2,375 casualties
Infrastructure Damage	Minimal, but building where attack occurs have to be destroyed
Evacuations/Displaced Persons	Evacuation and sheltering of approximately 3,000 may be required
Contamination	One building and contents
Economic Impact	$150 million to replace building
Potential for Multiple Events	Some businesses may never recover
Recovery Timeline	Moderate

Chlorine Tank Explosion

Casualties	3,750 fatalities
Infrastructure Damage	Multiple buildings, a trestle and a section of road in immediate explosion area
Evacuations/Displaced Persons	Up to 10,000 (self-evacuate);
Contamination	5,000 will need assistance to evacuate

Economic Impact	At explosion site and waterways
Potential for Multiple Events	Millions of dollars
Recovery Timeline	Yes

Radiological Attack – Radiological Dispersal Devices

Casualties	140 Casualties
Infrastructure Damage	Moderate to blast area
Evacuations/Displaced Persons	Yes, potentially 20,000
Contamination	Detectable contamination found in over 50 buildings and on 4 major roads including part of an interstate highway.
Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Years

Explosives Attack – Bombing Using Improvised Explosive Devices

Casualties	200 fatalities
Infrastructure Damage	Several structures affected by blast and fire
Evacuations/Displaced Persons	Minimal
Contamination	None
Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Months

Biological Attack – Food Contamination

Casualties	300 fatalities
Infrastructure Damage	None
Evacuations/Displaced Persons	None
Contamination	Sites where contamination was dispersed
Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Weeks

Biological Attack – Foreign Animal Disease (Foot and Mouth Disease)

Casualties	None
Infrastructure Damage	Significant loss of livestock
Evacuations/Displaced Persons	None
Contamination	None
Economic Impact	Millions of dollars
Potential for Multiple Events	Yes
Recovery Timeline	Months