

Preparing for Nuclear Terrorism

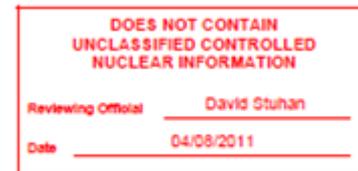
Todd Davidson, CEM

Contractor for the Department of Energy

Nevada National Security Site

National Security Technologies, LLC

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Introduction

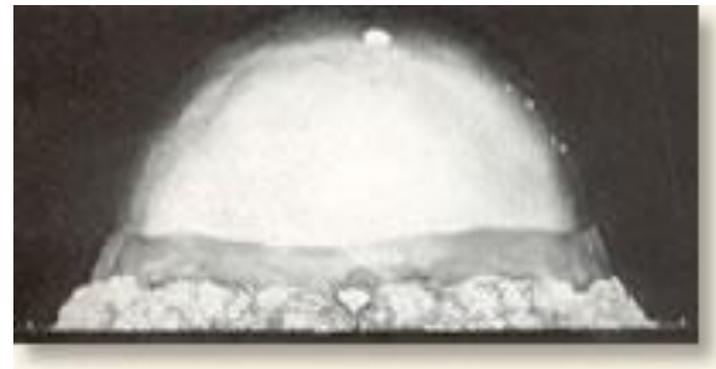
An all hazard approach includes acts of terrorism that can include **Improvised Nuclear Devices (INDs)** .

“If the radiance of a thousand suns were to burst forth at once in the sky, that would be like the splendor of the Mighty One...I am become Death, the shatterer of worlds.”

These words from the sacred Hindu epic, the *Bhagavad Gita*, were recalled by Robert Oppenheimer while viewing the first nuclear explosion in Alamogordo, New Mexico, on July 16, 1945.



J. Robert Oppenheimer (left) with Major W.A. Stevens on a trip to select site for Trinity, test site for first atomic bomb.



The Trinity Atomic Test 0.034 seconds after blast.

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Introduction (continued)

Terrorist organizations continue to pursue **Weapons of Mass Destruction** in the name of their causes.



This presentation will discuss one significant finding from the Full Scale Exercise Dark Sun-10 and some of the proactive measures that the Nevada National Security Site (NNS) has taken since.

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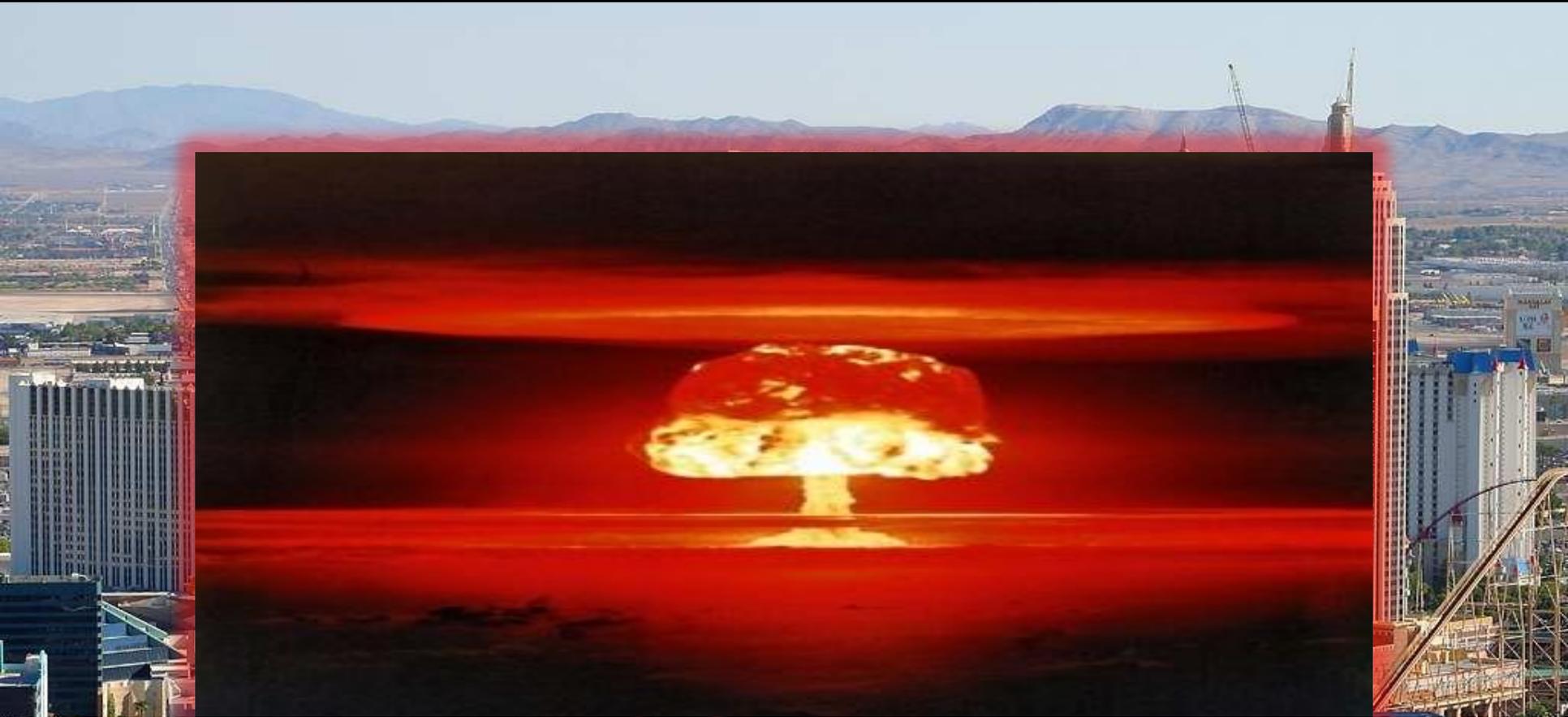
DARK SUN-10

Dark Sun-10 Full Scale Exercise Purpose:

Evaluate the ability of the DOE, NNSA/NSO Emergency Response Organization (ERO) to recognize and implement response measures relating to the effect of a terrorist related Improvised Nuclear Device (IND) detonation occurring in the Las Vegas region.



Exercise Scenario

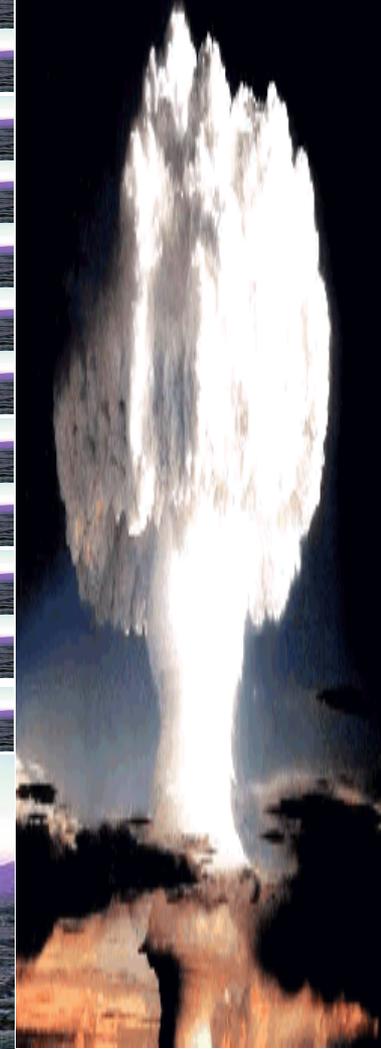
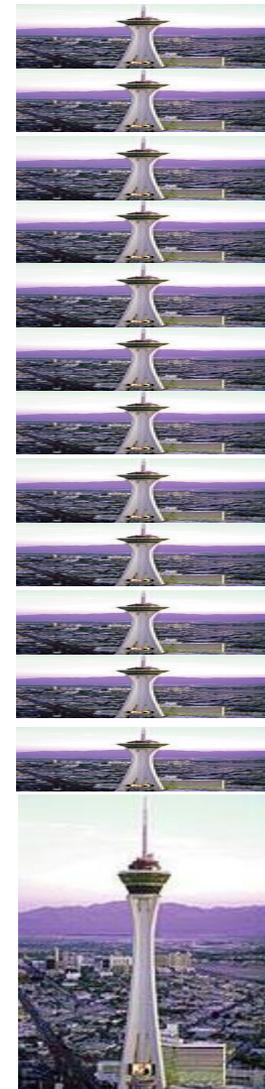


Exercise Scenario (continued)

People in the Las Vegas region hear the explosion and witness an extremely large mushroom cloud (26,000 feet).

- Electro Magnetic Pulse (EMP)
- No significant damage occurs at the NLVF

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Exercise Scenario (continued)



Meteorological Data :

Las Vegas Strip: wind direction from 220 degrees, wind speed 15.2 mph, 6.8 m/s, 13.2 knots, no precipitation



Exercise Scenario (continued)

The mushroom cloud rises above the city and begins to drift.



North Las Vegas Facility



Remote Sensing Laboratory

Emergency Response Organization

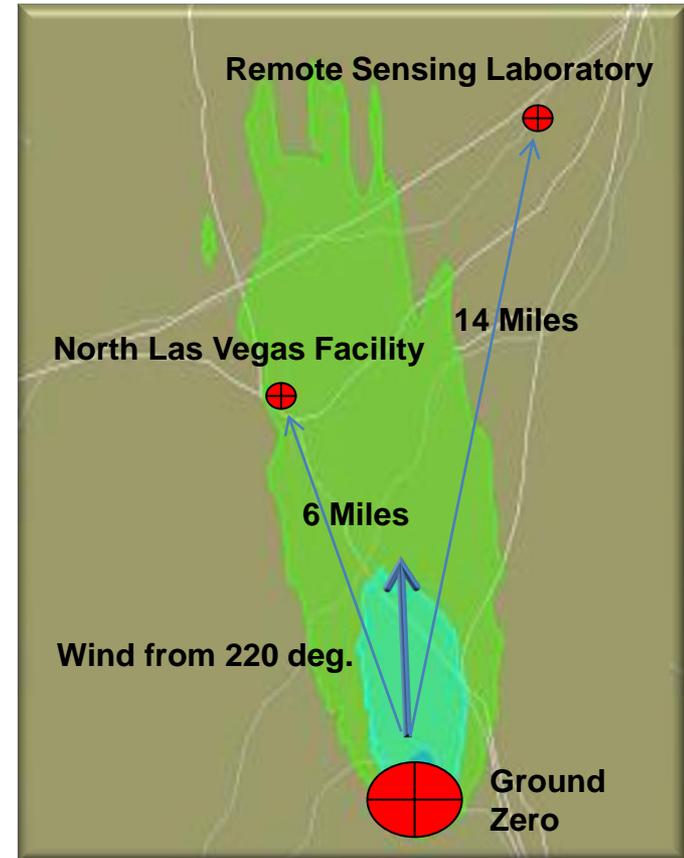
What actions should an ERO initiate?

Protective Action Notifications:

- Take Shelter or Evacuate?
- Or both?

Protective Action Considerations:

- What is the distance from the IND detonation?
- How much time before the plume arrives?
(Met Data vs. Fallout)



NNSS Emergency Response Organization

NNSS ERO consists of a three-tiered organizational structure:

Tier 1 Local Emergency Director (LED)
Facility Manager (FM)
Incident Commander(IC)

Tier 2 Emergency Management Center (EMC)
Operations Coordination Center (OCC)
Tactical Operations Center (TOC)

Tier 3 Emergency Operations Center (EOC)
Joint Information Center (JIC)

EMERGENCY MANAGEMENT

Dark Sun-10 Protective Actions

Protective Action Directions Issued:

Clark County issued an EAS message

- All residents are advised to “take shelter” until the hazard of the explosion can be assessed.
- Protective action to take shelter was provided by the OCC Duty Manager and notionally delivered to all employees located at the NLVF and RSL .

Dark Sun-10 Protective Actions (continued)

Protective Action Re-Direction Issued:

35 minutes post the event, the EOC provided a notional Protective Action re-direction.

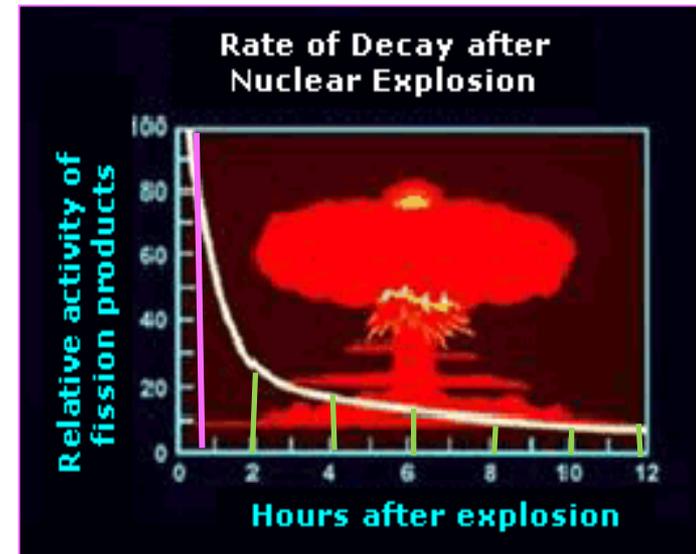
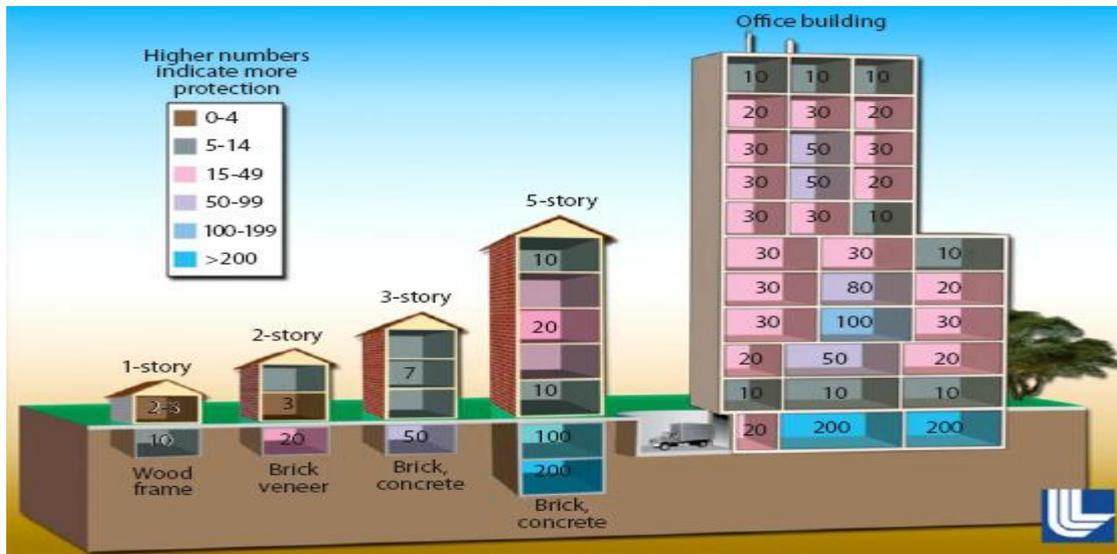
NOTE: The NLVF is located 6 miles from ground zero.



Preparedness

Employee Guidance and Protective Actions:

Radiation dangers are unique!



Lawrence Livermore National Labs

EMERGENCY MANAGEMENT

Preparedness (continued)



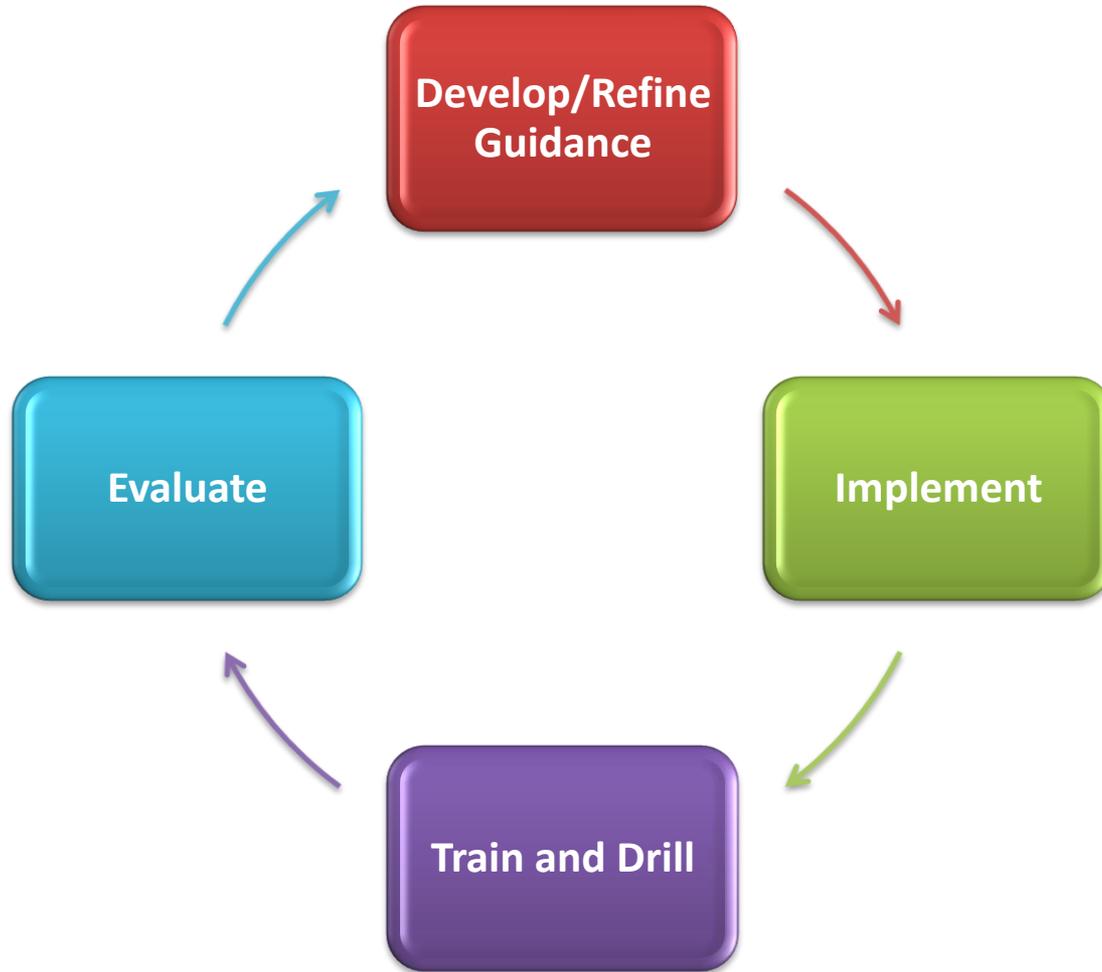
- Employee information campaigns have been initiated through workshops, tabletops, and venue drills. In addition, literature has been posted in buildings and on company websites to increase awareness.
- Drills and exercises have been conducted in North Las Vegas and at the NNSA involving key community response agencies to enhance preparedness for terrorism-related events.
- The preparedness for terrorism-related events has been a multi-year effort and has integrated local, state, and federal agencies that would be crucial to a regional response.
- Key terrorism-related exercises (2010-2011):
 - **Sidewinder-10** Full Scale Exercise (*International Terrorism*)
 - **Active Shooter-10** Functional Exercise (*Workplace Violence/Terrorism*)
 - **Dark Sun-10** Full Scale Exercise (*Nuclear Terrorism*)
 - **Undertaker-11** Full Scale Exercise (*Domestic Terrorism*)
 - **Sidewinder-11** Full Participation Exercise (*Domestic and International Terrorism*)



UNDERTAKER-11

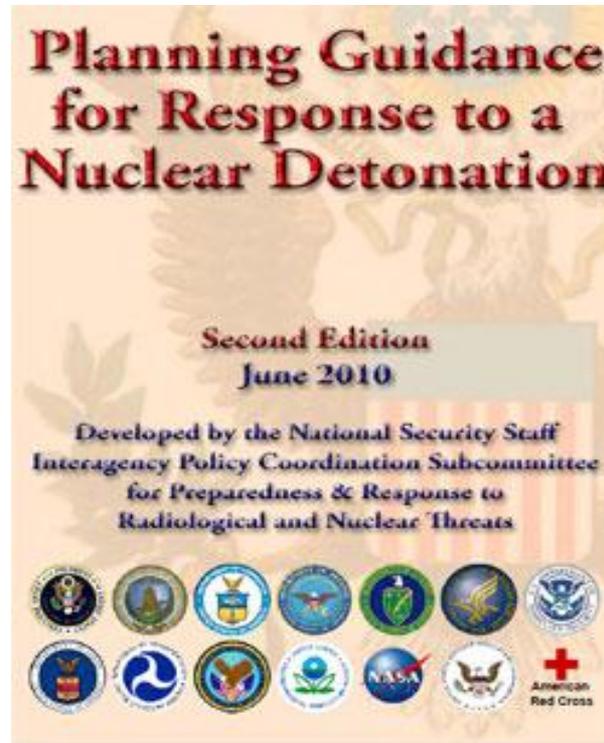


Cycle of Protective Actions



EMERGENCY MANAGEMENT

Conclusion/Reference



The guidance was developed by a federal interagency committee led by the Executive Office of the President (National Security Staff and Office of Science and Technology Policy).

<http://www.usuhs.mil/afri/outreach/pdf/planning-guidance2010.pdf>

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Any Questions?

Todd N. Davidson, CEM

Senior Exercise Planner

Contractor for the Department of Energy

Office: (702) 295-4358

E-mail: davidstn@nv.doe.gov

