Predicted Hot Zones for Worker Protection
(Presented in 6 time steps)

Notes:
• Immediate shelter, possibly followed by evacuation, is strongly preferred, particularly in the first hours.
• Plan evacuation routes away from the DF/Hot Zones to minimize dose during transit. Shortest route may not guarantee minimal dose.
• Size of Hot Zone grows for 1-3 days then shrinks with time.
• Fallout and radiation extend well beyond the Hot Zone, particularly downwind, but at a reduced level of concern.
• Assure health physics professionals supervise emergency workers in the Hot Zone, workers must not exceed dose limits.

Assumptions:
• Assumes 10 kt detonation at 0 ft elevation.
• Areas shown are model predictions based on an estimated source term but no measurements.
• Radioactive cloud has passed area displayed, radiation from fallout remains a serious hazard.
• Model assumes that no shelter or other protective actions have been taken to decrease exposure.

DANGEROUS FALLOUT ZONE
Radiation levels exceeding 10 R/h. Life-saving activities only. See Dangerous Fallout Zone map for details.
Total Population: 160,000
Area: 42.6 km²  Extent: 15.3 km

HOT ZONE
Radiation levels 10 mR/h to 10 R/h. Death, injury or illness possible. Monitor worker dose carefully and limit worker stay times. Stage response assets outside of the Hot Zone.
Total Population: 4,214,000
Area: 12,951 km²  Extent: 205 km

3 hours after detonation
Predicted Hot Zones for Worker Protection
(Presented in 6 time steps)

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**EXAMPLE**

**DANGEROUS FALLOUT ZONE**
Radiation levels exceeding 10 R/h. Life-saving activities only. See Dangerous Fallout Zone map for details.
Total Population: 14,600
Area: 2.8 km² Extent: 3.4 km

**HOT ZONE**
Radiation levels 10 mR/h to 10 R/h. Death, injury or illness possible.
Monitor worker dose carefully and limit worker stay times. Stage response assets outside of the Hot Zone.
Total Population: 4,833,000
Area: 17,005 km² Extent: 321 km

12 hours after detonation
Predicted Hot Zones for Worker Protection
(Presented in 6 time steps)

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DANGEROUS FALLOUT ZONE
Radiation levels exceeding 10 R/h. Life-saving activities only. See Dangerous Fallout Zone map for details.
Total Population: 4,210
Area: 1.1 km² Extent: 2.5 km

HOT ZONE
Radiation levels 10 mR/h to 10 R/h. Death, injury or illness possible. Monitor worker dose carefully and limit worker stay times. Stage response assets outside of the Hot Zone.
Total Population: 2,935,00
Area: 7,398 km² Extent: 204 km

24 hours after detonation
Predicted Hot Zones for Worker Protection (Presented in 6 time steps)

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IND Detonation

36 hours after detonation

A
DANGEROUS FALLOUT ZONE
Radiation levels exceeding 10 R/h. Life-saving activities only. See Dangerous Fallout Zone map for details.
Total Population: <1,000
Area: 0.5 km²  Extent: 1.3 km

B
HOT ZONE
Radiation levels 10 mR/h to 10 R/h. Death, injury or illness possible. Monitor worker dose carefully and limit worker stay times. Stage response assets outside of the Hot Zone.
Total Population: 2,112,00
Area: 4,347 km²  Extent: 156 km
Predicted Hot Zones for Worker Protection (Presented in 6 time steps)

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- **DANGEROUS FALLOUT ZONE**
  - Radiation levels exceeding 10 R/h.
  - Life-saving activities only. See Dangerous Fallout Zone map for details.
  - Total Population: <100
  - Area: 0.4 km² Extent: 1.1 km

- **HOT ZONE**
  - Radiation levels 10 mR/h to 10 R/h.
  - Death, injury or illness possible.
  - Monitor worker dose carefully and limit worker stay times. Stage response assets outside of the Hot Zone.
  - Total Population: 1,616,000
  - Area: 3,189 km² Extent: 129 km

48 hours after detonation

**Assessment Map**

- **A** DANGEROUS FALLOUT ZONE
- **B** HOT ZONE

**Example**

- **48 hours after detonation**

**Diagram**

- 20 Miles
- 20 Kms

**Ind Detonation**

- 48 hours after detonation