



United States Nuclear Regulatory Commission

*Protecting People and the Environment*

**Hostile Action-Based (HAB) Scenarios  
for Biennial Exercises: NRC Headquarters  
Operations Center Simulation/Involvement**

**NEI HAB Exercise Workshop**

Annapolis, MD

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Division of Preparedness and Response

Office of Nuclear Security and Incident Response

# Track of Interest Information

- Initial briefing will identify applicable aircraft or provide a Track(s) of Interest (TOI) number
- Track of Interest information provided:
  1. TOI #
  2. Geographical Reference Point – such as a major metropolitan area or Nuclear Power Plant
  3. Bearing to the Track of Interest from reference point
  4. Distance to reference point
  5. Altitude
  6. Heading
  7. Speed

# Sample Aircraft Scenario

- **[T = 0]** HOO contacts Palo Verde licensee and authenticates.
- **[T=1 minute]** “This is the NRC Headquarters Operations Officer. Approximately two minutes ago, the NRC received information about a possible aircraft threat. FAA lost radio contact with an aircraft, about 150 miles southeast of Las Vegas, NV. The aircraft has been labeled Track of Interest 1 (TOI1). TOI1 deviated from its flight plan, and is now headed southeast, speed 400 mph, altitude 30,000 feet. This is toward Phoenix, Arizona and the Palo Verde plants. TOI1 is a Boeing 757-200 with 190 passengers aboard. Flight originated from Los Angeles, headed to Washington Dulles.”

## Sample Aircraft Scenario

- **[T = 2 minutes]** “Still no radio contact with TOI1. Aircraft is heading southeast, altitude 25,000 feet. TOI1 is approximately 135 miles northwest of Phoenix. FAA reports that civilian pilots in the area observed a large aircraft pitching from side to side. Two fighter aircraft are responding and are expected to intercept TOI1 in 10 minutes.”
- **[T = 4 minutes]** “TOI1 speed 420 mph, altitude 25,000 feet, heading southeast, 120 miles (16 minutes) from Phoenix, AZ.”
- **[T = 6minutes]** “TOI1 headed southeast towards Phoenix. Distance 105 miles (14 minutes), speed 420 mph. Reports are that TOI1 may be hijacked.”

## Sample Aircraft Scenario

- **[T = 8 minutes]** “TOI1 is now headed south-southeast and appears to be heading toward Palo Verde. It is 90 miles from Palo Verde, altitude 6,000, descending. ETA to Palo Verde is 12 minutes.”
- **[T = 10 minutes]** “TOI1 is 80 miles from Palo Verde. Intercept aircraft report that the aircraft is unresponsive. ETA to Palo Verde is 10 minutes.”
- **[T = 12 minutes]** “TOI1 is now 65 miles from Palo Verde. Still descending. Intercept aircraft are in visual range of TOI 1 – the aircraft is not in a landing configuration. ETA to Palo Verde is 8 minutes.”

## Sample Aircraft Scenario

- **[T = 14 minutes]** “TOI1 is now 50 miles from Palo Verde. Still descending The aircraft is not in a landing configuration and appears to be descending to impact Palo Verde. ETA to Palo Verde is 6 minutes.”
- **[T = 16minutes]** “TOI1 is now 40 miles from Palo Verde. Still descending toward Palo Verde. Intercept aircraft unable to engage.”
- **[T = 18 minutes]** “TOI1 is now 25 miles from Palo Verde. Still descending. Impact 3 minutes.”
- **[T = 20 minutes]** “Intercept aircraft indicate that TOI 1 has impacted an industrial area.”

## **Simulation Thoughts – Physical Attack**

- Call NRC within 15 minutes
  - Authentication, Plant, type of attack, Emergency classification
  - Should be coordinated the day of the event if call to NRC is planned

## **Simulation Thoughts – Aircraft Attack**

- NRC HQ can simulate notification (Drills and training)
  - NRC involvement in graded exercises should be coordinated well in advance
- NRC Full Participation exercises will include a senior manager who can issue verbal orders





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# Questions?