



# Criteria for Development of Evacuation Time Estimate Studies

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# Evacuation Time Estimates (ETEs)

- Provide time to evacuate public from the plume exposure pathway emergency planning zone (EPZ).
- Provide licensees information to make appropriate Protective Action Recommendation (PAR).
- Provide Offsite Response Organizations (ORO) information to make appropriate Protective Action Decision (PAD).
- Guidance provided in NUREG/CR-7002, “Criteria for Development of Evacuation Time Estimate Studies,” supersedes previous guidance.

## **NRC Rulemaking**

- NRC is codifying ETE requirements to ensure consistency in development and updating of ETE studies.
- Public comments on NUREG/CR-7002 are currently being resolved.

## **NUREG/CR 7002 “Criteria for Developing Evacuation Time Estimate Studies”**

- The ETE criteria document establishes methodology that will provide more transparency in the use of modeling and includes new areas of consideration.
- Provides ETE evaluation criteria for use by NRC staff reviewers.

## **NUREG/CR-7002 Highlights**

- NUREG/CR-7002 requires ETEs be provided for residents, transients, schools, and special facilities.
  - Previously, ETEs required for residents and special facilities. Schools and transients were included with these.
- ETE studies will now include times for staged evacuation.

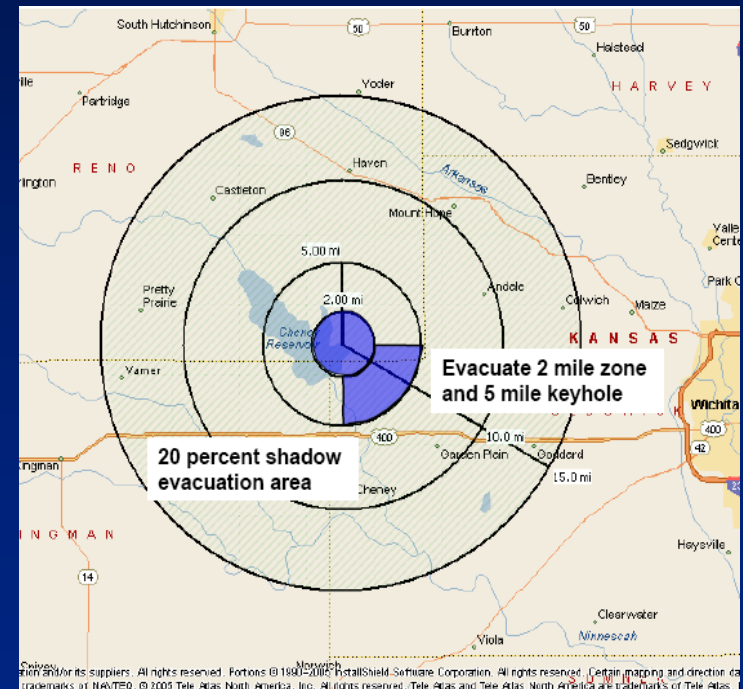
## **NUREG/CR-7002 Highlights**

- Traffic simulation model results need to be presented so are readily understood by decision makers and study reviewers.
  - 90% and 100% ETE values will be included.
  - Licensee and OROs should use 90% value when making PARs and PADs.

# NUREG/CR-7002 Highlights

## Analysis of Shadow Evacuation

- Evacuation of people from outside the officially designated evacuation area.
- Results in additional vehicles on the roadway which reduces capacity.
- A 20 percent value is used in analysis (more likely nearer the evacuation area, decreases with distance).



# NUREG/CR 7002 Highlights

## State and Local Review

- Interaction with State/local agencies necessary to obtain data, understand response capabilities, and understand traffic management system.
- ETE should list agencies contacted, briefly describe the interaction as related to ETE development.
- Ensures that agencies, such as those providing traffic control, are aware of ETE activities.
- ETE should be reviewed by State/local authorities.

# NUREG/CR-7002 Highlights

## ETE Review and Update

- Licensees provide ETE update to NRC within 180 days of either:
  - Availability of decennial census data.
  - EPZ or largest ERPA population increases or decreases 10 percent.

# NUREG/CR-7002 Highlights Summary

- The updated criteria includes:
  - Separate ETEs for residents, transients, schools, and special facilities.
  - Use of staged evacuation.
  - 90% and 100% ETEs included, 90% value used.
  - Consideration of shadow evacuation.
  - State and local review necessary.
  - ETE update criteria.
- Following methodology within NUREG/CR 7002 will facilitate consistent ETE reviews.