



United States Nuclear Regulatory Commission

Protecting People and the Environment

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.

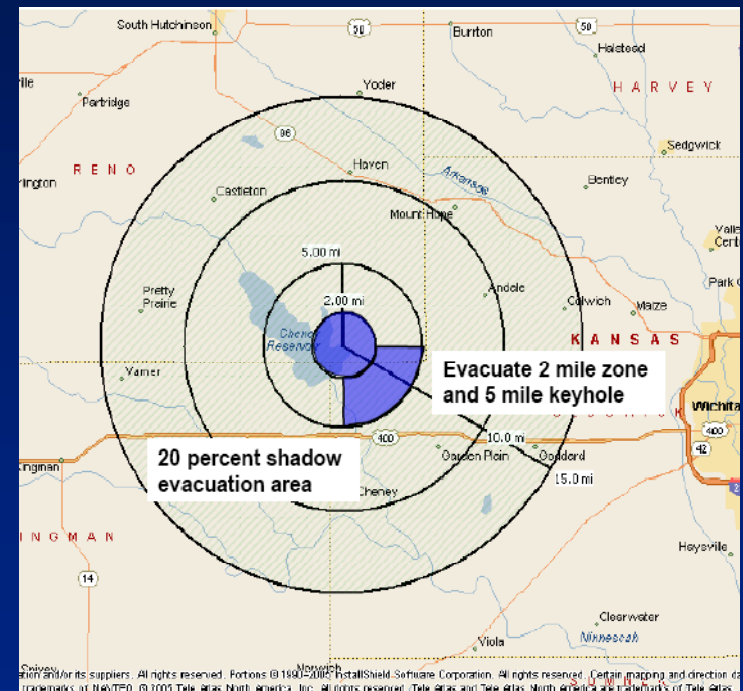
NUREG/CR-7002 Highlights

- 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.