

EPFAQ 2013-001 Draft Response

Question:

Section IV.6 of 10 CFR 50, Appendix E requires that, "If at any time during the decennial period, the EPZ permanent resident population increases such that it causes the longest ETE value" ...for specified zones to increase by specified amounts..., "the licensee shall update the analysis to reflect the impact of that population increase."

For many sites, the "longest ETE value" is likely to be based on a special event, adverse weather, or roadway impact scenario. In addition, the 100% would be the "longest ETE value." What scenarios should be considered?

NEI Proposed Solution:

The population update is based on the longest 90% ETE based on scenarios 1, 2, 3, 4, 5, 6, 7 or 8 specified in NUREG/CR-7002, Table 1-3.

Some ETEs may have additional scenarios that are variations on baseline scenarios 1 to 8 in Table 1-3 (e.g., separate adverse winter-weather scenarios for rain and snow) and should be considered.

The special event scenario and highway scenarios do not need to be considered

NRC Response:

The main function of the ETE is to support protective action recommendations (PARs) and decisions (PADs). During evacuations, a small percentage of the population, about 10 percent, takes longer to evacuate. This group of evacuees is referred to as the evacuation tail. For this reason, PARs and PADs should be based on evacuating 90 percent of the population (90% ETE). Since the 90% ETE value is used by decision-makers for PAR and PAD development, it should also be used when calculating the longest ETE values for the purpose of determining if an ETE update is necessary.

ETEs should be provided for the scenarios found in Table 1-3 of NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies." These scenarios identify combinations of variables and events to provide ETEs for varying conditions to support PAR and PAD development. Multiple scenarios are used to ensure that the individual ETEs encompass a range of potential site-specific evacuation situations. For this reason, all of the scenarios in Table 1-3 should be considered in determining the necessity of an ETE update, with two possible exceptions.

Scenario 10, Roadway Impact, need not be considered because the only purpose of this scenario, as specified in NUREG/CR-7002, Section 4.3, is to support the development of traffic

control planning, and it is not included in ETE compilation tables in NUREG/CR-7002 (e.g., Tables 4-3 and 4-4).

The need to include Scenario 9, Special Events, depends on the frequency of the special events analyzed. Scenario 9 may involve the congregation of a large, but transient, population into the EPZ for short periods of time. Licensees should consider using this scenario when determining whether an ETE update is necessary if the special event chosen for analysis is repetitive during the year, such as multiple home football or baseball games, and not a one-time event such as a seasonal parade. Licensees may use their discretion if it is a one-time event with short duration and/or minimal impact on the transient population.

If licensees provide site-specific scenarios in addition to those found in NUREG/CR-7002, Table 1-3, to cover the range of potential evacuation situations, they should also consider using these scenarios when calculating the longest ETE values for a potential ETE update utilizing the above same methodology as previously described.