

PA-LR

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Date: 05/22/2006 9:45:23 AM
Subject: Pilgrim ETE Comments

Alicia: Jill Brochu had suggested that I forwarded to you a copy of Pilgrim Station ETE discussion points that were put together following the NRC Environmental Scoping public meetings as a means of clarifying some elements raised at the meeting.

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Pilgrim Station Evacuation Time Estimates

A Discussion

General. Evacuation Time Estimates for Nuclear Power Stations derive significant developmental criteria from NUREG-0654 FEMA-REP-1, Rev.1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants".

Issues raised: Environmental Contentions Scoping Meeting.

Current ETE Revision. The elements updated in the most recent revision of the Pilgrim Station ETE are found in Revision 6, December 2004, with population estimates updated as appropriate to 2005.

10-mile EPZ ETE. Element J.8. of NUREG-0654 states that the "licensee's plan shall contain time estimates for evacuation within the plume exposure Emergency Planning Zone (EPZ)." This sets the federal standard for all ETEs to consider the 10-mile EPZ in their estimates.

Sheltering. Sheltering is considered in the State and local plans for individuals who may have impaired ability to evacuate, e.g., segments of nursing home and hospital populations. This population is not sizable and the implied impact of this population to the ETE is not established in the allegation.

Voluntary population. Revision 6 to the Pilgrim ETE considers a 50% voluntary population within ANY circular portion outside of an evacuated region, not just within a 2-mile ring, and 35%, not 25%, in the annular ring between the circle and the EPZ boundary. Page 2-2, Rev. 6.

Shadow evacuation. Shadow evacuation is specifically considered in the Pilgrim ETE. as "movement of traffic from Cape Cod during an emergency at PNPS is explicitly considered. Traffic control is designed to route traffic leaving Cape Cod from the Sagamore Bridge to the Bourne Bridge." Page 1-10, Rev. 6.

Special Events. There are multiple locations where it is alleged that various scenarios were not considered in the evacuation time estimates. In reality, multiple variables were considered in the development of the ETE. (See next section.) July 4th was specifically considered in the Pilgrim ETE, as represented by a holiday weekend survey that was conducted on beaches within the EPZ to determine the point of origin, vehicular occupancy and transportation modes of the people on the beach. Page 3-12, Rev. 6. King Richard's Faire, although outside the EPZ, has an access road that discharges traffic onto Route 58, a major evacuation route. This event was included in the estimated Population for Parks and Historic Sites, adding 1480 vehicles to the assumed vehicle loads. Page 3-15, Rev. 6

For hotels and motels, peak period occupancies were assumed. Page 3-16, Rev. 6

Scenarios. Twelve varying scenarios are included in the Pilgrim ETE using the following variables (Page 2-3, Rev. 6):

- Season
 - Summer
 - Off Season
- Day of Week
 - Mid week
 - Weekend
- Time of Day
 - Midday
 - Evening
- Weather Conditions
 - Good Weather
 - Rain
 - Snow

Planning Basis. The planning basis assumption for the calculation of the ETE is a rapidly escalating accident that requires evacuation, and includes the following:

- A Site Area Emergency precedes the GE by 25 minutes
- Advisory to evacuate is announced coincidental with the siren notification at GE.
- Mobilization of the general population will commence after siren notification of GE.
- ETE is measured relative to Advisory to Evacuate. Page 2-3, Rev. 6.

Worst Case Scenario. There is a misperception evident in the list of considerations, which states: "Emergency planning and a severe accident analysis must be for the worst case scenario – not the rosier." Indeed, the intent of having varying scenarios is to have an array of variables from which to choose the closest time estimate for evacuating an area. This information provides emergency decision makers a tool for more closely estimating evacuation time within their protective action decision making.

Evacuation Delay Time. NUREG-0654 specifies that planning should estimate the distributions of elapsed times associated with mobilization activities undertaken by the public to prepare for the evacuation trip. This results in elapsed times associated with each mobilization activity and the sum of these distributions form the Trip Generation Time Distribution. Chapter 5, Rev. 6, is dedicated to the discussion of the elapsed times for various events and activities leading to evacuation, including notification of various populations, including beach goers, persons on boats, households with/without commuters.

Distinguishing different populations. The list of considerations states that "There is no evidence that (the use of distinguishing varying populations, days of week, seasons, holidays, time of day scenarios) was done in the filing". Page 6-5, Rev. 6, provides vehicle estimates for various combinations of the 12 scenarios.

Transportation Dependent. The Pilgrim ETE dedicates a complete chapter, Chapter 8, Transit-dependent and Special Facility Evacuation Time Estimates. This section examines residents and transients with no vehicles available, special facilities, and private citizens who have special medical needs and cannot drive themselves. Transportation has been arranged through the Massachusetts Emergency Management Agency through Letters of Agreement to ensure adequate availability of transportation.