

SOARCA White Paper

Evacuation beyond the 10 mile Emergency Planning Zone

In the SOARCA project emergency response has been modeled to realistically reflect the protective actions that local officials would take in response to the severe accident. Approved licensee, state and local emergency plans have been used as the basis for protective response assumptions. These plans address expected actions within the 10 mile emergency planning zone (EPZ). However, it is also assumed that ad hoc protective actions would be implemented beyond the EPZ if state/local officials thought them necessary. This assumption has been a part of the EP planning basis since it was documented in NUREG-0654 "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants". The page from NUREG-0654 with this assumption is attached to this white paper for reference.

In order to realistically model response to severe accidents, the SOARCA team has assumed that evacuations will take place as far as 20 miles from the plant. The actions of state/local officials within the 10-20 mile region are not documented in emergency plans and would be taken ad hoc. The team assumed these actions would be taken based on knowledge of emergency response, discussed these assumptions with the licensees involved and intend to perform sensitivity analyses to determine the impact of other assumptions regarding offsite protective response.

The Commission has repeatedly stated that the current EPZ is protective of public health and safety. The SOARCA calculations support that statement. However, the SOARCA team believes there will be a risk communication issue when the study is published and shows the reduction of consequences based on protective actions beyond the EPZ. Communication of this issue should emphasize the original supposition that ad hoc protective actions beyond the EPZ are embodied in the EP planning basis.

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