



NUCLEAR ENERGY INSTITUTE

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U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: ESP-16a, NRC Review of Emergency Planning Information

Project 689

Dear Dr. Beckner:

This letter summarizes the industry response on the discussions and NRC correspondence relating to the implementation of the emergency planning (EP) options at the Early Site Permit (ESP) stage, as prescribed in 10 CFR 52.17(b).

Major Features Option: Each of the pilot ESP applications relating to emergency planning is based on the EP major features approach, and we expect that NRC staff and applicants will see this work through to conclusion. However, based on the experiences of the three pilot applications, we believe that it is unlikely that future ESP applicants would choose to adopt the major features option, even for a "greenfield" site, unless the current implementation guidance is revised. The existing guidance, when implemented, does not provide the substantial early resolution of emergency planning issues commensurate with the resource burden expended in meeting this option. Much of the work and the associated NRC reviews would have to be repeated as part of the COL application. As a result, there is minimal value for an ESP applicant to pursue this option per the existing regulatory guidance. Enclosure 1 provides additional information.

Significant Impediments Option: Enclosure 2 to this letter summarizes the industry's understanding related to the implementation of this option per the requirements of Section 52.17(b)(1). We request NRC staff confirmation or clarifications on these understandings and expectations.

Following the extensive discussions on the significant impediments option, it is clear that the regulatory guidance on the significant impediments approach,

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including Review Standard, RS-002 and NUREG-0654 should be updated as soon as possible.

Complete and Integrated Plans: Section 52.17(b)(2)(ii) provides that ESP applicants may submit complete and integrated emergency plans. In discussing the problems associated with the implementation of the major features option, it has become evident that for new reactor sites that would be adjacent to an existing site, the submission and NRC review of complete and integrated plans with combined license (COL) action items may provide substantial value and finality at the ESP stage.

The approach discussed in the January 18, 2005 meeting was that an applicant seeking an ESP at a site adjacent to an existing site would submit complete and integrated emergency plans, with COL action items for those elements that would not be in place at the ESP stage because it is impractical to supply design and operational elements without the selection and commitment to an approved design. Examples of potential action items would be statements relating to emergency action levels and plant-specific facilities. This approach would be consistent with the way issues have been resolved in design certification proceedings and reviews. At the combined license stage, the COL applicant would submit information to address these elements. This additional information would be subject to review and hearing in the COL proceeding.

The staff would use the guidance of NUREG-0654 to determine the adequacy of such plans. The NRC review of this option would lead to a reasonable assurance finding in the ESP that adequate protective measures can and will be taken in the event of a radiological emergency. This finding would have finality at the combined license (COL) stage in accordance with Section 52.39. The industry is very interested in discussing this option on a priority basis.

We look forward to further constructive interactions with the NRC staff on improving the regulatory guidance for the development and review of emergency planning provisions at ESP. If you have any questions regarding the comments and recommendations contained in this letter, please contact me (202-739-8094, aph@nei.org) or Russ Bell (202-739-8087, rjb@nei.org).

Sincerely,



Adrian Heymer

c: Mr. John Segala, NRC

"Major Features" Emergency Planning Option

Section 52.17(b)(2)(i) provides for the proposal and approval in an ESP of major features of emergency plans, such as the exact sizes of emergency planning zones.

The industry's original understanding on the development and NRC review of a major features EP option was that for operating reactor sites that have complete and integrated emergency plans in place, such as North Anna, Clinton and Grand Gulf, it would be relatively straightforward to obtain NRC approval for ESP of EP major features based on those existing approved plans. This has not turned out to be the case.

Two basic problems befell the major features option. First, major features have minimal finality at the COL stage. The NRC staff concluded that a COL review would include a complete review of how approved major features (e.g., sirens) are incorporated to facilitate the implementation of the sites complete and integrated emergency plans. Much of the work and NRC review performed at the time of ESP would have to be repeated as part of the COL application development and review. As a result, there is minimal value for an ESP applicant to pursue this option per the existing regulatory guidance.

The second problem is that the definition of EP "major features" severely limits the major features for which an ESP applicant could seek approval. NUREG-0654, Rev. 1, Supplement 2 (Draft), equates EP major features with high level planning standards and indicates that a major feature cannot be approved unless all elements/review criteria for a given planning standard (as defined for ESP) are satisfied. Major features could not be approved based on satisfaction of a subset of significant elements or review criteria within a given planning standard.

The extensive NRC requests for additional information from all three ESP applicants was unexpected and appears contrary to NRC RS-002, which states, "In general, the existing elements of an established emergency preparedness program and EP information that are relevant to and provided (or incorporated by reference) in the ESP application will be considered acceptable and adequate; and a detailed review will not be necessary." This unexpected level of requests for additional information required a level of effort from the applicant that far exceeded the limited value of the major features review, given the minimal finality accorded to the major features option.

We are especially concerned that if the value of the major features option is questionable, given the level of resources expended by the three pilot applicants using sites adjacent to existing nuclear plants, then it will be especially problematic

for "greenfield" ESP applicants for which it was originally intended. In addition, the limited finality provided by the major features option only compounds the uncertainty over the benefits from this approach.

Based on the experience of the pilot ESP applicants, we conclude that implementation of the major features option based on NUREG-0654, Supplement 2, does not provide for early resolution of EP issues, which is a tenet of the Part 52 process. Revisions are necessary to the regulatory guidance for the major features option to enable future ESP applicants to obtain approval of EP major features in a manner that provides value and early resolution of EP matters.

Identification of Significant Impediments to Development of Emergency Plans

Section 52.17(b)(1) requires that ESP applications “identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site that could pose a significant impediment to the development of emergency plans.” In the public meetings on this topic, there is an understanding that for ESP applications for a new plant located at an existing site; this demonstration should be very straightforward, requiring neither substantial submittal of new information by the applicant nor substantial NRC review. This is because the very existence of approved emergency plans for the existing site is compelling evidence that there are no significant impediments to the development of emergency plans for the new site.

On January 18, 2005, there was significant discussion on the need for the NRC to review the existing evacuation time estimate (ETE) for a new plant located at an existing site to determine that there are no significant impediments to the development of emergency plans. From these discussions and the NRC November 9, 2004 letter it is our understanding that “in seeking a finding of no significant impediments, the staff would not necessarily need to review that [ETE] information in detail.”

Based on the regulatory discussions, our expectations and understandings concerning guidance for satisfying Section 52.17(b)(1) are:

1. Section 52.17(b)(1) requires ESP applicant to identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. A finding of compliance with Section 52.17(b)(1) does not establish acceptability of any emergency plan. Specific emergency plans would be proposed by a COL applicant and reviewed by the NRC staff and FEMA at the COL phase. Rather, identification of potential significant impediments to the development of emergency plans provides a measure of confidence at the ESP stage that the physical characteristics of the site are amenable to development of emergency plans. Section 52.17(b)(1) does not require a finding of “no significant impediments;” it requires only the identification of potential significant impediments to the development of emergency plans. Doing so assures that any such impediments are clearly understood and documented in the ESP for future consideration at the COL stage.
2. In addition to providing sufficient information to address Section 52.17(b)(1), ESP applications must include a description of contacts and arrangements made with local, state, and federal government agencies with emergency

planning responsibilities, in accordance with Section 52.17(b)(3). As identified by the NRC staff in its letter to NEI dated May 30, 2003, if the applicant is unable to make arrangements with local, state and federal government agencies who have responsibilities for emergency preparedness, for whatever reason, the applicant should discuss its efforts to make such arrangements along with a description of any compensatory measures. The description and other information will be reviewed in consultation with FEMA.

3. To satisfy the requirements of Section 52.17(b)(1), an applicant seeking an ESP for an existing site may identify the existence of an approved emergency plan to support a demonstration for ESP that there are no significant impediments to the development of emergency plans for potential new units on that site.
 - (a) If the NRC staff concludes that the existing emergency plan is appropriate to support the ESP application, the staff would find that the applicant complies with Section 52.17(b)(1). A detailed review of the existing ETE itself, e.g., computer modeling, new inputs/outputs, etc., is not necessary to support this finding.
 - (b) The NRC staff is expected to consider an existing ETE when assessing compliance with Section 52.17(b)(1), if one exists for the site and is referenced in the ESP application, because an ETE is a tool for evaluating egress from a site in the event of an emergency. For example, an ESP applicant might credit the existence of an ETE and perform a preliminary evaluation of its general applicability to a new unit. Such an evaluation would discuss salient changes in physical characteristics since the current unit was licensed and the potential impact of a new unit on evacuation strategy. No NRC review of the existing ETE for the licensed unit, e.g., computer modeling, new inputs/outputs, etc., would be expected. However, it is appropriate for the NRC staff to assess the reasonableness of the preliminary evaluation regarding the impact of a new unit.
 - (c) ESP applications would include the basis for the concluding that the existing emergency plan for the site is appropriate for use in demonstrating compliance with Section 52.17(b)(1). For example, use of an existing ETE may be appropriate because there has been no significant change in the site environs since the current ETE was performed. In addition, the ESP applicant would discuss that the proposed location of additional units and support facilities, and additional personnel, would not pose a significant physical impediment to site egress.

If the local population has increased by more than 10% from that considered for ESP, the COL applicant would evaluate whether the additional population would change the conclusions of the existing ETE concerning physical characteristics that could pose a significant impediment to the development of emergency plans.

- (d) If an existing emergency plan is referenced in an ESP application, the existing ETE would be provided or made available for audit to the NRC staff.
4. Population and demographic projections over the term of the ESP are not necessary to support compliance with Section 52.17(b)(1) because of the limited purpose of the significant impediments option, which is to identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans,
 5. If the ESP is for a site where approved emergency plans do not exist, an ESP applicant may wish to provide a preliminary analysis of evacuation time to address Section 52.17(b)(1). A preliminary analysis of evacuation time is not required to conform to applicable regulatory guidance for ETEs, but the applicant must provide sufficient information to demonstrate that there are no significant impediments to future development of emergency plans. For example, a preliminary analysis would not need to assume traffic control measures that would be reflected in a full ETE.