

October 18, 2005

Mr. Adrian P. Heymer
Director, New Plant Deployment
Nuclear Generation Division
Nuclear Energy Institute (NEI)
1776 I Street, NW, Suite 400
Washington, D.C. 20006-3708

SUBJECT: ESP-16a, NRC REVIEW OF EMERGENCY PLANNING INFORMATION –
RESPONSE TO NEI'S MARCH 28, 2005, LETTER

Dear Mr. Heymer:

The purpose of this letter is to respond to the emergency planning issues raised in the March 28, 2005, letter to me from the Nuclear Energy Institute (NEI) (ADAMS Accession No. ML051150531), in which you discussed experience from the Nuclear Regulatory Commission (NRC) review of early site permit (ESP) applications. The March 28 letter addressed the provisions governing emergency planning for ESPs, namely, the requirements relating to significant impediments to the development of emergency plans, and the ESP applicants' options of proposing major features of emergency plans or complete and integrated plans. Enclosure 1 to your letter discusses the "major features" option in detail. Enclosure 2 to your letter includes several NEI expectations and understandings concerning the guidance for satisfying 10 CFR 52.17(b)(1). This letter provides the NRC staff's positions on the issues you raise, including the expectations and understandings expressed in your letter.

Please be aware, however, that in regard to the review of offsite emergency planning and preparedness proposed in an ESP application, the Federal Emergency Management Agency (FEMA) is currently evaluating the NRC positions expressed in this letter. We will inform you if FEMA's review results in any changes to these positions.

Staff responses to items in NEI's March 28, 2005, letter

Enclosure 1, Major Features

The staff agrees with NEI in part. The NRC staff evaluates major features of emergency plans in an ESP application in accordance with 10 CFR 52.18 to determine if they are acceptable. The acceptability determination is made by reviewing the major features in accordance with the review criteria of Supplement 2 to NUREG-0654/FEMA-REP-1 (Supplement 2). As currently written, Supplement 2 primarily focuses on descriptions of emergency planning elements, rather than (common) implemented plan elements that may already be in place at an ESP site with an operating reactor.

Supplement 2 was issued in 1996 as a draft report for comment. The NRC staff announced in Review Standard (RS)-002¹ that Supplement 2 would be used as the primary guidance for the staff's review of emergency preparedness information and plans submitted with an ESP application. Supplement 2 was used for the first three ESP applications. As a result of its use, both the industry and the staff have learned various lessons. The staff agrees with NEI that revisions are needed to the regulatory guidance for the major features option. The NRC proposes to elicit input from NEI, FEMA, and other stakeholders in revising Supplement 2. Nevertheless, the guidance of Supplement 2 as applied to the current ESP applications is sufficient for the staff to determine the acceptability (and finality) of various descriptions of proposed major features of emergency plans.

The staff does not agree with NEI that the finality of approved major features under the existing Supplement 2 is minimal. The approval of the descriptions of emergency planning elements associated with the major features options serves to provide finality, insofar as it describes the essential elements of advanced planning that have been considered—and to the extent that it addressed the respective emergency planning requirements in Appendix E of 10 CFR Part 50.

Acceptable major feature elements would not necessarily need to be reviewed in a subsequent combined license (COL) or operating license (OL) application referencing an ESP for which such features were approved. The COL application review would focus on the differences between the matters resolved in an ESP proceeding (e.g., plan descriptions), and the matters required for a complete and integrated plan (i.e., with respect to implementation). Accordingly, the staff does not agree with NEI that much of the work and NRC review performed at the time of the ESP stage would have to be repeated as part of the COL application development and review.

In regard to approval of a major feature based upon satisfaction of only a subset of significant elements or review criteria within a given planning standard, the staff agrees with NEI that the definition of major features is problematic. The standard for review in Section 52.18 is whether a major feature is acceptable. The acceptability of a major feature, based upon the satisfactory review of only a subset of applicable evaluation criteria in Supplement 2, is not addressed. As such, the staff has taken the position that partial satisfaction of a major feature's evaluation criteria will not result in an acceptable determination for that major feature. As discussed above, revisions are needed to the regulatory guidance to more clearly define major features and associated review guidance. These revisions will also serve to more clearly address reviews of existing elements of established emergency preparedness programs. As discussed below, the review of existing emergency preparedness features should be limited to whether the information is applicable, up-to-date, and reflects use of the proposed site for possible construction of a new reactor.

¹Review Standard (RS)-002, "Processing Applications for Early Site Permits," May 3, 2004 (ADAMS Accession No. ML040700094).

Enclosure 2, Significant ImpedimentsNEI Item 1

The staff agrees with the primary focus of NEI's comment. While the staff agrees with NEI that 10 CFR 52.17(b)(1) does not require a finding of "no significant impediments," Section 52.17(b)(1) is not the pertinent requirement. Rather, Section 52.18 provides the standard for review of an ESP application, and does require that the Commission, after consultation with FEMA, determine whether the information required of the applicant by Section 52.17(b)(1) shows that there is "no significant impediment" to the development of emergency plans. Further, the Statement of Considerations for proposed Part 52 states that, "§ 52.17(c) requires the application to demonstrate that the area surrounding the site is amenable to emergency planning[.]" 53 Fed. Reg. 32060 (August 23, 1988). While this provision in proposed § 52.17(c) was deleted in the final rule, the parallel portion of Section 52.18 was modified in the final rule as set forth above.

Under Section 52.18, if a significant impediment does exist, then the "no significant impediment" finding could not be made, and an ESP would not be issued for the site unless the application also described measures adequate to overcome such an impediment. Approval for an ESP site would not be warranted if there were significant impediments to the development of emergency plans that remained unresolved. Similarly, if an ESP application does not identify any physical characteristics unique to the proposed site that could pose significant impediments to the development of emergency plans, and the NRC, after evaluating the application and consulting with FEMA, determines that a significant impediment does exist, then an ESP would again not be issued for the site. While 10 CFR Part 52 does not define a "significant impediment," Supplement 2 to NUREG-0654/FEMA-REP-1, Revision 1 (Supplement 2 to NUREG-0654) provides the following definition:

I.D. Definitions - Significant impediment - A physical characteristic or combination of physical characteristics that would pose major difficulties for an evacuation or the taking of other protective actions as addressed in Section II of this document.

NEI Item 2

The staff agrees with NEI. In the event an applicant would have to discuss failed efforts to make arrangements with appropriate government agencies, the adequacy of any proposed compensatory measures would be determined on a case-by-case basis, in consultation with FEMA.

NEI Item 3(a)

NEI's analysis refers to an NRC staff conclusion that an existing emergency plan is "appropriate" to support an ESP application, but what is intended is not entirely clear. The staff's position is that the mere existence of emergency plans for an existing facility is not determinative as to compliance with Section 52.17(b)(1). That is, the absence of significant impediments to the development of the existing emergency plan does not necessarily mean that none exist for the proposed ESP site. Further, there may have been significant impediments to the development of the existing plan. Whether an existing plan can be used to

satisfy Section 52.17(b)(1) would have to be determined based on an evaluation consistent with the applicable guidance in RS-002 and Supplement 2.

RS-002 and Supplement 2 together address the extent to which the staff should review existing elements of an established emergency preparedness program—which would include an evacuation time estimate (ETE) that has been incorporated into an ESP application. The review and evaluation would be based on, and specifically limited to, the information submitted (or incorporated by reference) in the application. RS-002 states, in part, in Section 4.5, “Use of Existing Information From Nearby Facilities for ESP Applications – Additional guidance for emergency planning review,” the following:

Emergency planning information for an existing, operating reactor site (i.e., from a prior licensing action) may be included in an ESP application; either directly, or through incorporation by reference. Such information will be reviewed to verify it (1) is applicable to the proposed site, (2) is up-to-date when the application is submitted, and (3) reflects use of the proposed site for possible construction of a new reactor (or reactors).

The extent to which emergency planning information for an operating reactor site will be reviewed will be dependent upon the specific ESP application. In general, the existing elements of an established emergency preparedness program and emergency planning 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. For example, the adequacy of an existing offsite siren system would not be subject to a detailed review.

The adequacy of such referenced elements of an existing emergency preparedness program for an operating reactor site that would include one or more proposed additional reactors would have to be adequately justified in the ESP application. The ESP application would need to clearly indicate the impact of applying an existing emergency preparedness program element to the expanded use of the site, including addressing any necessary changes to the program in support of the new reactor(s).

For a proposed ESP site that is on or adjacent to a site with an operating plant having approved emergency plans that are maintained in accordance with 10 CFR 50.54(q), and where features of the existing emergency plan are included in the ESP application, there would be a presumption of adequacy for those existing features. While RS-002 correctly states that a detailed review would not be necessary, this does not mean that the existing features would not be reviewed. As stated in RS-002, the review should be limited to whether the information is applicable, up-to-date, and reflects use of the proposed site for possible construction of a new reactor. This would apply to those portions of the existing emergency plan—including the existing ETE—that have been incorporated into the ESP application.

NEI Item 3(b)

The staff agrees with NEI in part. The NRC would 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. This would consist of a review of the ETE to verify it meets the three evaluation criteria discussed in response to NEI Item 3(a), above.

The staff does not agree with NEI's statement that no NRC review of the existing ETE for the licensed unit would be expected if the ESP applicant performs a preliminary evaluation of the ETE's general applicability to a new unit, and that the staff would only assess the reasonableness of this "preliminary evaluation." This approach would serve to isolate from any review the document that the preliminary evaluation would be based upon, such that the accuracy of the information in the preliminary evaluation could not be confirmed.

NEI states that the preliminary 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. For purposes of Section 52.17(b)(1), and specifically for a site with an existing emergency plan, the burden of identifying significant physical impediments to the development of emergency plans would be minimal, as an emergency plan has already been developed, even though such impediments may be identified. The use of a preliminary evaluation of an existing ETE could provide an efficient way to address the three evaluation criteria in RS-002 for existing elements of an established emergency preparedness program, including an ETE. The staff's review of the proposed preliminary evaluation would confirm that it accurately reflects the ETE and addresses the three evaluation criteria discussed in response to NEI Item 3(a), above. A further, more detailed, examination of the ETE should not be necessary.

NEI Item 3(c)

As clarified by the response to NEI Item 3(a), the staff agrees with NEI.

NEI Item 3(d)

The staff agrees with NEI, to the extent that the NRC would review the existing ETE to verify it meets the three evaluation criteria discussed in response to NEI Item 3(a), above.

NEI Item 4

The staff does not agree with NEI. Population demographic projections over the term of the ESP are important factors to consider in determining if the physical characteristics of the proposed site could pose a significant impediment to developing emergency plans. The physical characteristics of a proposed site may indicate no limitation of egress from an area with little or no population at the time of the ESP application. However, if population projections indicate substantial growth for that same area over the term of the ESP, this could result in egress limitations that could become significant impediments to developing emergency plans in the future.

A. Heymer

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NEI Item 5

The staff agrees with NEI.

Complete and Integrated Plans

The staff agrees with NEI. The staff will continue to work with NEI, FEMA, and other stakeholders to develop appropriate guidance to accommodate the submission of complete and integrated emergency plans with COL action items at the ESP stage, with the exception that ITAAC or permit conditions will be necessary to control certain implementation issues, rather than COL action items.

Should you have questions regarding this letter, please contact Mr. John Segala at (301) 415-1858.

Sincerely,

/RA L. Dudes for:/

William D. Beckner, Program Director
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Project No. 689

cc: See next page

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*See previous concurrence

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