

June 20, 2003

Dr. Ronald L. Simard  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708

SUBJECT: RESPONSE TO LETTER ON EARLY SITE PERMIT TOPIC 7 (ESP-7),  
GUIDANCE FOR SATISFYING 10 CFR 52.17(a)(1) REQUIREMENTS

Dear Dr. Simard:

The purpose of this letter is to respond to your second letter on the subject early site permit (ESP) topic dated April 10, 2003. This letter does not change any of the understandings and expectations stated in our letter dated February 5, 2003, regarding compliance with Title 10 of the *Code of Federal Regulations* (10 CFR) 52.17(a)(1) for ESP applications. Further, applicants should also refer to specific technical guidance in Section 15.0, Radiological Consequences of Design Basis Accidents, of the ESP Review Standard (RS), which was issued for interim use and comment on April 11, 2003. Given that specific technical review guidance should reside solely within the ESP RS in order to avoid any confusion or inefficiency during the application review, no statement made in this letter should be construed as overriding or conflicting with the guidance provided in the ESP RS. We confirm the understandings and expectations cited in your letter with the clarifications as listed below:

Understandings and expectations:

1. Although discussion regarding ESP-7 pertains to the radiological dose consequence evaluation needed to meet the requirements of 10 CFR 50.34(a)(1), technical guidance for this and other safety (e.g., 10 CFR 100.21(c)(1)) and environmental impact assessment reviews for radiological releases will be addressed in the ESP RS.
2. Although statements in Items 2, 6 and 7 only partially address the requirements of 10 CFR 50.34(a)(1) in that they do not address the design or plant parameter envelope (PPE) inputs to radiological dose consequence assessments, the staff agrees that the general concept expressed regarding use of site short-term atmospheric dispersion factors is consistent with the applicable regulations.
3. The staff agrees with Item 3 that the approach outlined in Enclosure 1, in general, is consistent with Section 15.0 of ESP RS. ESP applicants who utilize the PPE approach must also provide bounding PPE values for the design basis accident (DBA) source term parameters expressed as (1) the isotopic quantities of fission products released in curies to the environment from the site and (2) rates of fission product release to the environment from the site as a function of time.
4. The staff agrees with Item 4 to the extent, that in general, bounding DBA radiological consequence analyses need not (1) focus on the nature and behaviors of source term inside containment; (2) describe the times and rates of fission products appearance

into containment; and (3) describe the isotopic quantities and the chemical forms of fission products released from the fuel, following selected bounding DBAs if the subject information is unavailable. The staff acknowledges that the three prospective ESP applicants have stated that they will provide, consistent with Section 15.0 of the ESP RS, information on release paths, credited mitigation features and other information necessary for the staff to make a determination regarding the acceptability of the proposed site using the radiological consequence evaluation factors identified in 10 CFR 50.34(a) (1).

5. In response to Item 5, any design information designated as a (PPE) parameter will be treated as detailed in the staff response letter dated February 5, 2003, regarding the Generic ESP Topic ESP-6, PPE approach.

Please contact Mike Scott, ESP Project Manager, at 301-415-1421 if you have any questions on this matter.

Sincerely,

**/RA/**

James E. Lyons, Director  
New Reactor Licensing Project Office  
Office of Nuclear Reactor Regulation

Project No. 689

Enclosure: As stated

cc w/encl: See next page

into containment; and (3) describe the isotopic quantities and the chemical forms of fission products released from the fuel, following selected bounding DBAs if the subject information is unavailable. The staff acknowledges that the three prospective ESP applicants have stated that they will provide, consistent with Section 15.0 of the ESP RS, information on release paths, credited mitigation features and other information necessary for the staff to make a determination regarding the acceptability of the proposed site using the radiological consequence evaluation factors identified in 10 CFR 50.34(a) (1).

5. In response to Item 5, any design information designated as a (PPE) parameter will be treated as detailed in the staff response letter dated February 5, 2003, regarding the Generic ESP Topic ESP-6, PPE approach.

Please contact Mike Scott, ESP Project Manager, at 301-415-1421 if you have any questions on this matter.

Sincerely,  
/RA/

James E. Lyons, Director  
New Reactor Licensing Project Office  
Office of Nuclear Reactor Regulation

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**\*See Previous Concurrence**

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ESP-Generic

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