

April 26, 2012

James M. Bleigh
Performance Contracting, Inc.
Engineered Systems Group
16047 West 110th Street
Lenexa, KS 66219

SUBJECT: PERFORMANCE CONTRACTING, INC., LARGE FLUME TEST PROTOCOL

Dear Mr. Bleigh:

I am responding to your letter dated December 16, 2011, (Agencywide Document Access and Management System Accession No. ML11363A127) which forwarded Revision 0, Draft B of the proprietary document entitled "Large Flume Test Protocol (LFTP) Element Issues & Resolution," with the "Large Flume Test Protocol Outline" attached. We have reviewed the LFTP document and agree that it can be used as guidance to conduct plant-specific testing needed to address Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," as long as our additional comments below are taken into consideration. However, this does not constitute official endorsement of the protocol because application of the protocol necessitates making a number of plant-specific decisions when the tests are conducted.

The LFTP document states that the protocol is the basis for an integrated test that incorporates and simultaneously evaluates debris transport, settling, and strainer performance testing based on prototypical plant conditions following a loss-of-coolant accident. The LFTP document summarizes several references which have previously been discussed in meetings with the U.S. Nuclear Regulatory Commission (NRC). The NRC staff did not consider the references in this review since the description in the LFTP document was sufficient. The LFTP document also identifies hold points in the testing where you intend to have additional discussions with the NRC before proceeding.

The NRC staff has the following comments on the LFTP Outline, which should be taken into consideration as testing proceeds:

- Section 5 of the LFTP Outline provides guidance for determining the limiting break location for testing, but also allows licensees to select the limiting break location. The LFTP is a significant refinement to methods that have typically been used to conduct testing associated with Generic Letter 2004-02. As such, the NRC staff is concerned that licensees will have difficulty determining the limiting break location for the LFTP since it may not coincide with the limiting break location used for other methods. If a specific location is selected by a licensee as the limiting break, it should be validated using the guidance described in Section 5.
- Section 5 of the LFTP Outline does not state that the effects of turbulence on transport would be considered in the evaluation of the limiting break location. The NRC staff notes that turbulence can have a significant effect on transport and should be considered in choosing the limiting break location.

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- The LFTP Outline states that tap water will be used in the tests. The industry is currently evaluating whether the use of tap water can affect tests nonconservatively. The results of industry findings should be considered when conducting these tests.

If you have any questions, please contact Blake Purnell at (301) 415-1380.

Sincerely

/RA by SBahadur for/

Timothy J. McGinty, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

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