



NUCLEAR ENERGY INSTITUTE

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August 3, 2007

Mr. Patrick M. Madden
Deputy Director
Division of New Reactor Licensing
New Reactors Office
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Site-Specific COL ITAAC on Backfill Under Category 1 Structures

Project Number: 689

Dear Mr. Madden:

The enclosure provides proposed site-specific COL ITAAC on backfill under Category 1 structures. We are providing this proposed ITAAC (and Design Description) for discussion during the public meeting on COL application guidance issues that has been set for August 8-9.

The potential need for a site-specific COL ITAAC on backfill under Category 1 structures has been discussed in recent public meetings with the NRC staff. While Regulatory Guide 1.206 does not specifically call for such an ITAAC, we have determined that backfill under Category 1 structures meets the criteria for ITAAC because proper backfill is integral to the ability of Category 1 structures to withstand design-basis loads.

We also determined that a backfill ITAAC was amenable to generic development and have coordinated the enclosure with all design centered working groups. The backfill ITAAC would be included only in COL applications for sites where the native soil conditions call for backfill under Category 1 structures. The backfill ITAAC would also be included in LWA applications where the requested activities involve backfill under Category 1 structures.

Mr. Patrick M. Madden

August 3, 2007

Page 2

To support near term COL and LWA applications, we request that the staff be prepared on August 8 to discuss the enclosure and reach agreement on the backfill ITAAC. Ultimately, we recommend that RG 1.206 be updated to reflect the need for a backfill ITAAC at certain sites.

If you have any questions, please contact me at (202) 739-8087; rjb@nei.org.

Sincerely,



Russell J. Bell

Enclosure

c: Mr. William D. Reckley, NRC
Mr. Michael A. Canova, NRC
NRC Document Control Desk

Backfill Design Description and ITAAC

For use only for sites where the native soil conditions call for backfill under Category 1 structures. Applicants would insert site-appropriate values for soil density requirements in Table WXYZ. Values indicated below are for illustration only.

Design Description

Backfill under Category I structures is installed up from the defined bearing layer to meet average and minimum soil density requirements specified in Table XYZ.

ITAAC

Design Requirement	Inspections and Tests	Acceptance Criteria
Backfill under Category I structures is installed to meet average and minimum soil density requirements specified in Table WXYZ.	Testing will be performed during placement of the backfill materials.	The installed backfill under Category I structures meets the average and minimum soil density requirements specified in Table WXYZ.

Table WXYZ – Compaction Requirements for Backfill under Category 1 Structures

Average Compaction (all tests)	W% Compaction (e.g., 97%)
Less than X% of compaction test results (e.g., 10%) are below Y% compaction (e.g., 95%)	
No compaction test results less than Z% compaction (e.g., 93%)	