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Mr. Jim Kennedy  
U. S. Nuclear Regulatory Commission  
Division of Waste Management  
Mail Stop 623-SS  
Washington, D. C. 20555

Distribution:  
Kennedy Linehan  
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Dear Mr. Kennedy:

Enclosed is the abstract "Peer Review as Established and Implemented by the Basalt Waste Isolation Project," to be given by David H. Dahlem, Department of Energy, Richland, WA. at the Nuclear Waste Management Quality Assurance Topical Conference on January 21, 1986

If I can be of any further assistance, please call me at (509) 376-6406.

Very truly yours,

D. H. Dahlem, Chief  
Geoscience and Technology Branch  
Basalt Waste Isolation Division

BWI:DHD

Enclosure

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-ABSTRACT-

Peer Review as Established and Implemented  
by the  
Basalt Waste Isolation Project

The technically advanced nature of repository design, including data collection and analysis activities that are used in support of design development and verification, and the regulatory environment with regard to limiting risks to the health and safety of the public for nuclear waste storage require that traditional Design Verification Methods be modified to explicitly address those review techniques that will be applied when judgement must be utilized as the review criteria. To accomplish this objective, the Design Review Method of Design Verification can be modified via the utilization of expert reviewers, i.e., individuals who have expertise equivalent to those who performed the design to be reviewed, functioning as a group of Peer Reviewers within a given discipline. This group of reviewers, based upon their experience and knowledge as experts, can then review, within their discipline, a design with their conglomerate judgement formulating the review criteria. However, it is important to note that the Peer Review process must be precisely controlled in order to ensure that it functions as intended and can readily be substantiated. To this end, controls are applied by establishing formal methods that control and document the criteria for performance of a Peer Review; the qualifications and independence of designated Peer Reviewers; the conduct of a Peer Review; and all documentation resulting from the process. Furthermore, the effectiveness of the methods developed to control the Peer Review process can be enhanced by comparison to case histories of past "peer reviews." For the Design Review of those designs where judgement must be utilized as the review criteria, Peer Review, when properly conceived, controlled, and documented, is a valuable quality technique for assuring that such a design is correct and satisfactory.

D. H. Dahlem  
Branch Chief - Geoscience and Technology Branch  
12/18/85