compliance analyses. EPA is proposing that use of expert judgment be limited to those situations where data is not reasonably attainable through data collection or experimentation.

To assure that the Agency is aware of all cases in which expert judgment is used, EPA is proposing that any compliance certification application clearly identify all instances in which such judgment is used and the names and professional affiliations of experts involved. Moreover, documentation shall be included which describes the process for expert judgment elicitation, the results of expert elicitation, and the reasoning behind those results. Documentation shall also be provided of interviews used to elicit judgments from experts, deliberations and formal interactions among experts, background information provided to experts, and the questions or issues presented for elicitation of expert judgment. Access to this information will help the Agency assess the quality and appropriateness of expert judgment as well as DOE's interpretation and use of that judgment.

Although EPA has not specified any particular methods for expert judgment elicitation in today's proposal, the Agency does believe that some restrictions and guidelines for the selection of individuals for expert judgment are appropriate. The restrictions which EPA is proposing today include prohibitions on: selecting individuals who are members of the team of investigators requesting the judgment or the team of investigators who will use the judgment; selecting individuals who maintain a supervisory role or who are supervised by (directly or indirectly) those who will utilize the judgment; and selecting a membership of which no more than one-third consists of individuals who are employed directly by the Department or its contractors (unless it can be shown that this is impracticable because of a lack or unavailability of qualified independent experts, in which case at least one-half of the membership must be non-DOE personnel). University professors with grants from the Department not related to work on the WIPP and the New Mexico **Environmental Evaluation Group are not** considered employees or contractors of the Department for purposes of this part. Additionally, compliance applications shall provide information which demonstrates that the expertise of any individuals involved in expert judgment is consistent with the level of knowledge required by the question or issue presented to that individual.

Furthermore, the Agency is requiring that at least five individuals be used in any expert elicitation process, unless a lack or unavailability of experts can be demonstrated. Also, any compliance certification application shall include a discussion explaining the relationship between the information presented, the questions asked, the judgment of any expert panel or individual, and the purpose for which the expert judgment is being used. The Agency is proposing all of the above requirements to assure that expert judgment is elicited in a manner that is as objective and informed as possible.

As a final means of helping to assure the appropriateness of expert judgment, EPA is proposing that the elicitation process afford an opportunity for presentation to the experts of the scientific and technical views of outside groups and individuals. This provision is being proposed in today's notice because the Agency believes it will help to provide experts involved in elicitations with a fuller range of information and view points upon which to base their judgments.

The Agency considered several different approaches to the use of expert elicitation and concluded that though each was appropriate for a specific type of situation, none were appropriate for all types of situations. For example, one approach identified would require that the average of all values elicited by an expert panel be used as the final judgment. This may be appropriate if the issue presented to an expert panel lends itself to meaningful averaging of values. For instance, if an expert panel is asked to determine the rate of rainfall in the Delaware Basin over 10,000 years, the range of answers that would be obtained from the various experts would be expressed in numbers that could be meaningfully averaged. However, if an expert panel is asked to determine whether the possibility of a meteor hitting the WIPP site is likely, the answers would be expressed in terms of yes or no, which cannot be meaningfully averaged. Hence, depending on the situation, this approach may not be appropriate.

Given the above, EPA believes that it may not be useful to specify a particular method. However, the Agency solicits comments on alternative approaches to incorporating the results of expert judgment elicitations into compliance assessment

## Peer Review

Peer review is widely used as a means of validating technical data, processes and assumptions. Peer review involves a group of experts who are convened to review work conducted by their peers to determine whether the work was performed appropriately and in keeping with the purpose intended.

Since a large part of compliance applications will consist of data and descriptions of methods for producing data, EPA believes that peer review can be helpful as a means of validating the information contained in such applications. Therefore, the Agency proposes that peer review be used to support compliance applications. Specifically, EPA proposes to require peer review of any information contained in any compliance certification application regarding the evaluation of engineered barriers, consideration of processes and events that may affect the disposal system's performance, quality assurance programs and plans, models and computer codes and including data used to support them, and waste characterization activities. Peer review can build additional confidence in the soundness of these important aspects of a compliance certification.

EPA proposes that peer review be conducted in a manner which is compatible with the Nuclear Regulatory Commission's NUREG-1297 "Peer Review for High-Level Nuclear Waste Repositories," which is incorporated by reference in today's proposal. This document provides guidance on the definition of peer review, the acceptability of peers, and the conduct and documentation of peer review.

## **Containment Requirements**

The Agency's disposal regulations found in 40 CFR part 191 include requirements for containment of radionuclides. These containment requirements specify numerical requirements limiting the cumulative release of radionuclides over 10,000 years. The specific release limits are found in Appendix A of the disposal regulations. The containment requirements specify that there be less than one chance in ten of cumulative releases exceeding the limits specified in Appendix A and less than one chance in 1,000 of cumulative releases exceeding ten times those limits.

## Application of Release Limits

The containment requirements of 40 CFR part 191 specify that releases from a disposal system to the accessible environment can not exceed release limits set forth in Appendix A, Table 1. Information about the curie content will be needed for calculation of the release limits. However, because the curie content of the waste inventory will vary over time due to natural ingrowth and decay of radionuclides, a question arises concerning when the curie content of