

October 10, 2002

Library of Congress
Mr. Richard Yarnall
Federal Advisory Committee Desk
Anglo-American Acquisition Division
Government Documents Section, Room LM-B42
101 Independence Avenue, SE
Washington, DC 20540-4172

Dear Mr. Yarnall:

In accordance with Section 9 of the Federal Advisory Committee Act, the Nuclear Regulatory Commission hereby files the required Charter for the newly established Peer Review Committee For Source Term Modeling.

Sincerely,

/RA/

Andrew L. Bates
Advisory Committee
Management Officer

Attachment:
As Stated

U.S. NUCLEAR REGULATORY COMMISSION
CHARTER
PEER REVIEW COMMITTEE FOR SOURCE TERM MODELING

1. The Committee's official designation:

Peer Review Committee For Source Term Modeling

2. The Committee's objectives, scope of activities and duties are as follows:

Develop guidance documents that will assist the NRC in evaluating the impact of specific terrorist activities targeted at a range of spent fuel storage casks and radioactive material (RAM) transport packages, including spent fuel. The documents will be developed from a literature search, appropriate code usage and an expert judgement process as described below. For each cask or package analyzed, the source term information shall be developed to include the following:

- a. The fraction and isotope listing of radioactive material released. The NRC will identify specific designs, quantity and the events to be analyzed.
- b. Thermal and pressure driving forces for particulate release, and temperatures at which the source term becomes less dispersible (such as solidification into fragments that fallout quickly). Note that some canisters are pressurized initially to 5 atmospheres with helium and the impact of that initial pressurization shall be included separately as part of the evaluated particulate release.
- c. The fraction of RAM aerosolized.
- d. The total amount of RAM released from the cask (or package).
- e. Estimate of the fraction that plates out and settles on the ground and an estimate of the area over which such settling takes place.
- f. An estimate of the particle size distribution in the release.

The full committee will serve as an "expert panel" and shall be composed of individuals with expertise in structural, nuclear, and thermal engineering, fuel performance and source term evaluations, consequence analyses, weapons and explosives, and transportation of radioactive material. The committee will refine the objectives, define evaluation criteria, develop the methodology, evaluate the scenarios, and write the guidance documents. All of this work will be based on previous and current studies and experiments, and the expertise of the individuals on the panel. The resulting guidance documents will be based on the qualitative judgments of the panel. A Smaller Expert Task Group will consist of individuals who will have complementary expertise to that of the committee. The Task Group will gather available data needed for the threat evaluations, revise and refine the range of payloads, packages and attack scenarios, provide an initial analysis of the sabotage scenarios and develop preliminary estimates

for source terms for the more severe threats. The results of the Task Group will serve as a starting point for the work of the full committee.

3. The Committee's termination date, if less than two years, from the date of establishment:

September 30, 2004
4. Agency or Official to whom this Committee reports:

U.S. Nuclear Regulatory Commission
5. Agency responsible for providing necessary support to this Committee:

U.S. Nuclear Regulatory Commission
6. The duties of the Committee are set forth in Item 2, above.
7. Estimated annual direct cost of this Committee*
 - a. \$250,000
 - b. Total staff-years of support: 1.0 FTE
8. Estimated number of meetings per year:

6 Full Committee meetings and approximately 4 Task Group meetings per year
9. The Committee's termination date, if less than two years, from the date of establishment of renewal:

See item 3, above.
10. Filing date:

October 10, 2002

Andrew L. Bates
Advisory Committee Management Officer

*Includes travel, per diem, and compensation