

April 13, 2004

The Honorable Shelley Berkley
United States House of Representatives
Washington, D.C. 20515

Dear Congresswoman Berkley:

The staff of the U.S. Nuclear Regulatory Commission (NRC) recently completed an independent evaluation of the quality of certain technical information in three documents the U.S. Department of Energy (DOE) may use to support its expected application for a license to build a high-level radioactive waste repository at Yucca Mountain, Nevada. Enclosed is a copy of the report of this evaluation.

While the NRC found a number of good practices, it also identified some concerns with both the clarity of the technical bases presented in the reports evaluated and with the sufficiency of technical information DOE used to explain the technical bases. The number and similar pattern of concerns found in the three documents that NRC reviewed suggests that other DOE documents may have similar limitations. To review DOE's potential license application, the NRC will need to understand DOE's explanation of its technical bases and find that DOE has supplied sufficient technical information to justify that explanation. The report finds that if DOE continues to use its existing policies, procedures, methods and practices at the same level of implementation and rigor, the license application may not contain information sufficient to support the technical positions in the application. This could result in the NRC issuing many requests for additional information in some areas, which could extend the time needed for the NRC staff to complete its safety review and, in the end, delay a determination on issuance of a construction authorization.

The three documents evaluated, known as Analysis Model Reports, were selected because NRC believes their subjects are of significance to understanding the performance of a potential repository at Yucca Mountain. These documents are on: (1) general and localized corrosion of the waste package outer barrier, (2) commercial spent nuclear fuel waste form degradation model and (3) drift (*i.e.* tunnel) degradation analysis. The NRC assembled a team which conducted three week-long audits during the months of November, December and January. The team evaluated DOE's process for developing and controlling the quality of the three documents and reviewed the effectiveness of recent DOE corrective actions affecting the quality of models, software, and data. The NRC made no determination on the technical adequacy of the documents evaluated, and conclusions drawn from the results of this evaluation indicate neither NRC acceptance nor rejection of any DOE documents.

As Chairman Diaz committed in his January 9, 2004, letter to you on this subject, the NRC has documented the results of this evaluation, and is making its findings public. Copies of this report, "U.S. Nuclear Regulatory Commission Staff Evaluation of U.S. Department of Energy

The Honorable Shelley Berkley

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Analysis Model Reports, Process Controls, and Corrective Actions," will be available on the NRC web site at: <http://www.nrc.gov/waste/hlw-disposal/reg-initiatives/resolve-key-tech-issues.html>. The NRC staff will present its findings to DOE at a public Technical Exchange, in Las Vegas, on May 5, 2004. DOE staff and members of the public will have opportunities to ask questions about the evaluation and about the staff's findings. The NRC staff expects DOE to provide a written response to the evaluation findings by June 4, 2004.

Please contact me if you have any questions on this matter.

Sincerely,

/RA/

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
NRC Staff Evaluation Report

April 13, 2004

The Honorable John Ensign
United States Senate
Washington, D.C. 20510

Dear Senator Ensign:

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Enclosure:
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April 13, 2004

The Honorable Jon C. Porter
United States House of Representatives
Washington, D.C. 20515

Dear Congressman Porter:

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April 13, 2004

The Honorable Harry Reid
United States Senate
Washington, DC 20510

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Office of Congressional Affairs

Enclosure:
NRC Staff Evaluation Report

April 13, 2004

The Honorable David L. Hobson, Chairman
Subcommittee on Energy and Water Development
Committee on Appropriations
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

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Enclosure:
NRC Staff Evaluation Report

cc: Representative Peter Visclosky

April 13, 2004

The Honorable Pete V. Domenici, Chairman
Subcommittee on Energy and Water Development
Committee on Appropriations
United States Senate
Washington, DC 20510

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The Honorable Pete V. Domenici, Chairman
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The Honorable James M. Inhofe, Chairman
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United States Senate
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The Honorable George V. Voinovich, Chairman
Subcommittee on Clean Air, Climate Change
and Nuclear Safety
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

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The staff of the U.S. Nuclear Regulatory Commission (NRC) recently completed an independent evaluation of the quality of certain technical information in three documents the U.S. Department of Energy (DOE) may use to support its expected application for a license to build a high-level radioactive waste repository at Yucca Mountain, Nevada. Enclosed is a copy of the report of this evaluation.

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The three documents evaluated, known as Analysis Model Reports, were selected because NRC believes their subjects are of significance to understanding the performance of a potential repository at Yucca Mountain. These documents are on: (1) general and localized corrosion of the waste package outer barrier, (2) commercial spent nuclear fuel waste form degradation model and (3) drift (*i.e.* tunnel) degradation analysis. The NRC assembled a team which conducted three week-long audits during the months of November, December and January. The team evaluated DOE's process for developing and controlling the quality of the three documents and reviewed the effectiveness of recent DOE corrective actions affecting the quality of models, software, and data. The NRC made no determination on the technical adequacy of the documents evaluated, and conclusions drawn from the results of this evaluation indicate neither NRC acceptance nor rejection of any DOE documents.

The NRC has documented the results of this evaluation, and is making its findings public. Copies of this report, "U.S. Nuclear Regulatory Commission Staff Evaluation of U.S. Department of Energy Analysis Model Reports, Process Controls, and Corrective Actions," will

The Honorable Joe Barton

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be available on the NRC web site at: <http://www.nrc.gov/waste/hlw-disposal/reg-initiatives/resolve-key-tech-issues.html>. The NRC staff will present its findings to DOE at a public Technical Exchange, in Las Vegas, on May 5, 2004. DOE staff and members of the public will have opportunities to ask questions about the evaluation and about the staff's findings. The NRC staff expects DOE to provide a written response to the evaluation findings by June 4, 2004.

Please contact me if you have any questions on this matter.

Sincerely,

/RA/

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
NRC Staff Evaluation Report

cc: Senator Thomas Carper

April 13, 2004

The Honorable Ralph M. Hall, Chairman
Subcommittee on Energy and Air Quality
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

The staff of the U.S. Nuclear Regulatory Commission (NRC) recently completed an independent evaluation of the quality of certain technical information in three documents the U.S. Department of Energy (DOE) may use to support its expected application for a license to build a high-level radioactive waste repository at Yucca Mountain, Nevada. Enclosed is a copy of the report of this evaluation.

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Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
NRC Staff Evaluation Report

cc: Representative Rick Boucher

April 13, 2004

The Honorable James M. Inhofe, Chairman
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

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The Honorable Joe Barton

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Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
NRC Staff Evaluation Report

cc: Senator James M. Jeffords

The Honorable Joe Barton

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Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
NRC Staff Evaluation Report

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*see previous concurrence

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