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Office of the Governor

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OFFICE OF THE  
ASSISTANT DIRECTOR  
FOR MATHEMATICAL AND  
PHYSICAL SCIENCES

MAR 8 2001

Governor Gary E. Johnson  
State Capitol  
Santa Fe, New Mexico 87503

Dear Governor Johnson:

Thank you for your letter of February 2, 2001 regarding New Mexico's contributions to science and technology and your support for use of DOE's Waste Isolation Pilot Plant (WIPP) for astrophysics research. I am aware, of course, of the many important contributions of the Sandia and Los Alamos National Laboratories and the Very Large Array operated by the National Radio Astronomy Observatory. And the potential use of the WIPP facility as an underground astrophysics laboratory is well known to the Divisions of Physics and Astronomy here at NSF. Let me summarize what I know about the ongoing discussions regarding development of underground facilities in the U.S.

There is a lot of excitement in the physics community regarding the scientific case for a national underground astrophysics laboratory. Such a facility would serve several sub-fields (particle physics, nuclear physics, astrophysics, and cosmology) and has potential value to other fields as well. While it is true that a committee has formed to hold workshops to consider the scientific case for a national underground laboratory, this committee grew out of the community and was not appointed by the NSF. The relatively rapid formation of this planning exercise was stimulated by the announcement in September 2000 by the Homestake Company that they are planning to close and decommission the Homestake mine in the coming months. This announcement occurred shortly before a town meeting for the nuclear sciences long-range planning process in Seattle. After discussions at that meeting, we received a proposal to support workshops to consider the scientific case for underground experiments. The proposal expressed plans to form a broadly representative Underground Laboratory Committee to lead the deliberative process. Subsequently, the same group requested and received support from the DOE to enable them to visit all the potential sites.

The Underground Laboratory Committee is chaired by John Bahcall, Princeton University, and they met in December to discuss the scientific drivers, priority experiments, and possible sites for an underground laboratory. I understand that WIPP,

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Homestake, and other sites are being investigated. The planning process is aimed at identifying the most compelling science and the underground sites that are best matched to the science. I am confident that the community is conducting this exercise in an open manner to bring out the best ideas and recommendations. The Underground Laboratory Committee is having its final meeting March 3-4, 2001, a meeting at which all candidate sites will have another opportunity to present their case and answer questions, including the important considerations that you mention in your letter. I join you in looking forward to the outcome of these deliberations.

Sincerely,



Robert A. Eisenstein  
Assistant Director for Mathematical  
and Physical Sciences

Cc: The Honorable Pete Domenici  
The Honorable Jeff Bingaman  
The Honorable Joe Skeen  
Dr. James F. Decker  
Professor John Bahcall  
Dr. Ines Triay