



RICE UNIVERSITY

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July 16, 2010

Dr. Wesley T. Huntress, Chair
Science Committee of the NASA Advisory Council
Geophysical Laboratory of the Carnegie Institution of Washington
5251 Broad Branch Road
Washington, DC 30015-1305

Dear Wes:

On May 13-14, 2010, the Planetary Protection Subcommittee met at NASA Headquarters, ending an eighteen-month hiatus during which PPS meetings had not been held. The PPS is currently catching up from the year-and-a-half hiatus. To accomplish that, the PPS is undertaking to increase, somewhat, its pace of regular meetings.

Following its November 2008 meeting – its most recent meeting prior to May 2010 – the PPS formulated and transmitted to the Science Committee a set of recommendations, two of which remain salient, but yet unanswered or acted upon. These two recommendations, which were also publicly presented at the July 13-14 Science Committee meeting, are attached.

Lastly, let me say what a pleasure it is to be working with you again in the NASA advisory structure. NASA continues to serve, very importantly, the national – as well as the broader human – interest, advancing our nation's scientific and technological capabilities, as well as illuminating questions that have been central to human beings throughout all of history, thereby elevating the human spirit.

Sincerely,

Eugene H. Levy, Chair
Planetary Protection Subcommittee

cc. Catherine Conley, NASA Planetary Protection Officer
Members of the Planetary Protection Subcommittee

Attachments

NASA Advisory Council
Tracking Number: ??-??-??

Committee Chair: Eugene H. Levy, Planetary Protection Subcommittee (PPS)

Dates of Public Deliberation: 16 May 2010, PPS
14 July 2010, NAC–SC

Date of Transmittal: 16 July 2010

Short title of the proposed Recommendation:

Protect scientific integrity of in case of private-sector exploration or presence

Short description of proposed Recommendation:

The Planetary Protection Subcommittee recommends that NASA pursue appropriate external avenues for ensuring that sites on the Moon containing evidence of past human activity be protected from damage by future exploration efforts. With the advent of the Google X-Prize and plans for increased exploration of the Moon (or Mars), it is critical to ensure the scientific integrity of these sites – whether explored by governmental or commercial entities.

Major reasons for proposing the Recommendation:

The sites on the Moon that have previously been visited by human or robotic explorers present uniquely valuable artifacts of human presence and of the sequelae of human presence in the space environment. Unique and fragile evidence of such phenomena as “weathering” on the lunar surface, the fate of microbial matter, and the potential long-term viability of spores exposed at the lunar surface is present at the previously visited lunar sites. The integrity of this evidence is of significant priority in future exploration of the lunar surface. Governments are subject to international treaties and oversight from established bodies. At present no such oversight is formally provided for in the context of private-sector exploration.

Consequences of no action on the proposed Recommendation:

A unique record of potential human impact in the space environment will be susceptible to being compromised in the course of non-governmental lunar exploration.

NASA Advisory Council
Tracking Number: ??-??-??

Committee Chair: Eugene H. Levy, Planetary Protection Subcommittee (PPS)

Dates of Public Deliberation: 16 May 2010, PPS
14 July 2010, NAC–SC

Date of Transmittal: 16 July 2010

Short title of the proposed Recommendation:

Restore the Planetary Protection Advisory Committee (PPAC), and its status as a direct report to the NASA Advisory Council

Short description of proposed Recommendation:

The reporting structure for recommendations on planetary protection should provide for direct input to the NASA Advisory Council and the NASA Administrator. Reporting through the Science Committee to the NAC creates potential conflict of interest with science and exploration programs, which could undermine public trust.

- The regulatory component of Planetary Protection and charter of the PPAC/PPS have elements that are complementary to, yet distinct and separate from, the scientific focus of the Science Committee of the NAC.
- The science component of Planetary Protection should continue to report through the Science Committee of the NAC to help ensure integration of science recommendations and effective coordination and balance of Planetary Protection and science goals.
- The National Research Council's Space Studies Board has repeatedly advised NASA that it must ensure the integrity of the Planetary Protection Office and advisory bodies as separate from the science side of the Agency (NRC 1992, 1997, 2002). There are valid reasons to position the Planetary Protection Officer within the Science Mission Directorate, but none justify subordinating the planetary protection advisory body, and potentially filtering its advice.

NRC 1992, Biological Contamination of Mars: Issues and Recommendations, National Academy Press

NRC 1997, Mars Sample Return: Issues and Recommendations, National Academy Press

NRC 2002, The Quarantine and Certification of Martian Samples, National Academy Press

Major reasons for proposing the Recommendation:

The regulatory component of Planetary Protection and the specific responsibilities – within NASA and on behalf of NASA to the public – dictate the need for independence and direct accountability, both in reality and in appearance, in the reporting of analyses and recommendations.

Consequences of no action on the proposed Recommendation:

The regulatory and public-responsibility component of Planetary Protection will continue to be at risk of compromise by the appearance – and potentially the reality – of conflicts of interest between exploration, science, and planetary protection considerations.