Los Alamos
NATIONAL LABORATORY
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memorandum

Office of the Director

Subject: Follow up to Wednesday's All Hands Meeting

At Wednesday's all hands meeting, Mike Anastasio provided you with his vision and the LANS approach to achieving the science mission at the Laboratory. Mike has asked that I provide you with his summary of his vision for science. To that end, Mike's summary of his message is provided below. I encourage you to view the rebroadcast of Mike's all-hands meeting on Labnet Channel 10 (rebroadcast times can be found at http://www.hr.lanl.gov/TIO/labnet10.htm).

To: **Los Alamos National Laboratory Employees**
From: **Michael R. Anastasio, President, LANS, LLC, and LANL Director Designate**
Date: **February 24, 2006**

This is another in a series of updates about Los Alamos National Security, LLC (LANS) approach to taking LANL into the future as an outstanding national security science lab. In previous messages we discussed our new company, the key personnel, integration, and our general approach in leading the Lab.

On Wednesday, February 22, I addressed science and technology at an all-hands meeting at LANL. On March 9, I will present our organizational approach in some detail in preparation for the letters you will receive in mid-March offering employment with LANS. That is the next major milestone for us in the transition.

Regarding science and technology -- they must and will thrive at this Laboratory. They are at the core of what we are: a national security science lab using our unique capabilities to help the nation. My vision for the science at LANL flows from my view of what characterizes a national security science lab. These are my personal views as the incoming Lab director, and they are also the views of the LANS team. We believe:

- We are a Lab that has an overarching commitment to the national interest and are willing to subjugate our personal interests to the needs of the country. We accept challenges at a level of difficulty, scope, complexity, and impact that others won't even attempt.
- We will innovate in science and engineering -- innovations that anticipate future needs of the country even when there is no apparent sponsor, support, or certain outcome. And, we carry out

our commitments with disciplined execution so that we can deliver outcomes and products as a result of our innovation.
- We will commit to ambitious, even audacious, goals that presume breakthroughs for success.

The Laboratory has done this repeatedly over its history, starting with the Manhattan Project, to the Human Genome, to the Stockpile Stewardship Program, and the Comprehensive Nuclear Test-Ban Treaty.

We have learned that we need to engage the broad scientific community for these breakthroughs. This is the theme of integration I've previously discussed. We can't be a self-contained Lab; rather we need to draw on the best capability wherever it resides. That includes foreign nationals, a vigorous post-doc and student program, and collaboration and partnership with our sister laboratories.

I've previously mentioned that I think of science and technology in two pieces: the breakthrough science and technology needed to carry out our current missions, and the breakthrough science and technology that anticipate what our country needs in its difficult-to-predict future. Whatever the goal, the work we do **MUST** be done with intellectual integrity and scientific objectivity, leaving no question in anyone's mind. Our missions will often generate debate. Policy makers and the country must be able to trust that controversy and the ensuing pressures will not compromise our advice.

In my talk, I discussed two grand challenges, one related to the fundamental science underlying nuclear performance for our stockpile stewardship mission and one related to the world-wide detection of nuclear materials for our counter proliferation and counter terrorism missions. I also outlined five scientific challenges that I discussed in our offer to the DOE to recruit the best, and develop and extend the underlying Lab capabilities:

- Fundamental understanding of materials and their dynamic response
- Beyond the standard model to understand the universe -- stellar formation, cosmology, dark energy, dark matter
- High-temperature superconductivity from 5f electrons for energy efficiency and support of actinide sciences
- Carbon-neutral fuel cycle -- from energy efficiency, to carbon sequestration, to the administration's new Global Nuclear Energy Program initiative
- Complex natural systems -- how to make system-level predictions, for example, at the intersection of energy, environment, and life sciences

The nation needs LANL's scientific capabilities to address current and future security needs. Our central focus will be to foster science, encourage innovation, recruit and retain top talent and balance short- and long-term needs with research driven by principal investigators as well as research aligned with missions.

Science at the highest level must thrive at LANL. To thrive, it's all about people and providing the environment to create and innovate science that delivers system solutions for our national security, now and in the future.

In closing, there were two questions in the meeting that I was unable to answer. Knowing these answers are important to you in your employment decision process, the LANS team is researching them and we will provide the information to you as soon as possible.