November 7, 2003

Mr. David E. Beck
Assistant Deputy Administrator
for Military Application and Stockpile Operations,
Defense Programs - NA-12
National Nuclear Security Administration
U. S. Department of Energy
100 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Beck,

In July 2003, you chartered me to perform an independent assessment of issues relating to the structure and performance of the Nuclear Explosive Safety Studies (NESS) for operations at NNSA facilities and for NNSA off-site transportation of Nuclear Explosives and Weapons. That assessment is now complete and is documented in the enclosure to this memorandum.

The assessment is drawn from: extensive interviews with all elements of the Federal, Laboratory, and Contractor community involved in the subject; review of governing orders, directives, and guidance; and observation of segments of this community as they dealt with the subject. I request that you distribute copies of this assessment to both the line and safety review elements of the Federal, Laboratory, and Contractor organizations.

The key findings are consistent with those reported in my status briefing to you on August 19, 2003. In answer to the principal issues given in the assessment charter:

> The Senior Technical Advisor Panel (STAP) is adding value to the NESS process and operation. NA-12 should be their sponsor and should assure review of and action, as appropriate, on their suggestions to improve both the line safety processes as well as those of the NESS. NA-12 should direct the recruitment of future members of the STAP to assure it remains an effective element of the Nuclear Explosive Safety process.
>
> The roles and responsibilities of the Federal structure involved in Nuclear Explosive Safety need to be codified. NA-12 should involve both Headquarters and field elements on this effort. The assessment identifies the major areas where definition is needed. NNSA needs a champion for Nuclear Explosive Safety matters, with purview of both line and independent review processes and performance. NA-12 should have that role.

The governing orders, directives, and guidance need to be updated to capture revised roles and responsibilities and to consolidate the supplemental guidance formerly provided by the Albuquerque Operations Office. With few exceptions, any shortcomings in performance are the result of flaws in execution of reasonably well-defined processes; therefore, no large-scale process revision is needed, although management of/leadership in the existing processes should be a priority.

The Nuclear Explosive Safety Change Control processes, although well defined, need to be reviewed and affirmed or modified. The focus should be on defining, if possible, a process to expedite incremental and "obvious" safety improvements while maintaining the integrity of the safety pedigree. The change control process currently defined in Chapter 11.7 of the Development and Production Manual cannot be stretched to cover such instances under the "trivial" or "minor" categories, although attempts have been made to do so.

Federal authorities must eventually decide that an appropriate level of safety has been demonstrated to authorize a new or modified Nuclear Explosive operation. This decision judges that the remaining safety risk is acceptable in light of the benefit of the operation to national security. These Federal decision makers should assure that the line Contractor and Laboratory, in developing operations and their safety bases, are driving toward acceptable but non-zero goals.

I would be pleased to amplify any points in the assessment.

Sincerely,

Edwin E. Ives
Independent consultant

Enclosure: Official Use Only Report, "Assessment of Nuclear Explosive Safety Study (NESS) Operations and Processes of the National Nuclear Security Administration (NNSA), October 2003

Copy to:
Col. Edwin B. Schmidt, NA-121
Mr. Martin Schoenbauer, NA-122