

Permit 3/19/10



STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT

IN THE MATTER OF:

APPLICATION OF THE UNITED STATES)
DEPARTMENT OF ENERGY AND)
LOS ALAMOS NATIONAL SECURITY, LLC)
FOR A HAZARDOUS WASTE FACILITY)
PERMIT FOR LOS ALAMOS NATIONAL)
LABORATORY)

No. HWB 09-37(P)
HWB 10-04(P)

TESTIMONY OF WILLIAM S. REES, JR.

SUMMARY

Thank you for the opportunity to present testimony on the issue of open burning of hazardous waste at TA-16. I am Will Rees, Principal Associate Director for Global Security at Los Alamos National Laboratory (LANL). At Los Alamos, I am responsible for all programs directed at reducing the global threat from terrorism and weapons of mass destruction. Today, I would like to discuss with you the open burning activities at LANL, focusing on our national security work to understand and protect soldiers from homemade explosives and improvised explosive devices. High explosives (HE), HE machining waste, and HE-contaminated wastes, equipment, and building materials from across the laboratory are treated at the S-Site Burning Ground to remove the reactive characteristics of HE using an open burn process operation.

HOMEMADE EXPLOSIVES (HME) AND IMPROVISED EXPLOSIVE DEVICES (IEDs)

Since October 2001, improvised explosive devices (IEDs, roadside bombs, and suicide car bombs) have caused over 65% of all American combat casualties in Iraq and 50% of combat casualties in Afghanistan, both killed and wounded.¹ Scientists at the Laboratory are using their expertise to prepare U.S. military personnel to deal with IEDs and homemade explosives that they

¹ DOD Personnel and Military Casualty Statistics, Defense Manpower Data Center, *Casualty Summary by Reason, October 7, 2001 through March 6, 2010*; available at [http://siadapp.dmdc.osd.mil/personnel/CASUALTY/gwot_reason.pdf].



might encounter while deployed overseas. Personnel selected by the military attend an intensive explosives course at the Laboratory to learn how to detect, identify, and characterize a wide variety of improvised explosive compounds and their ingredients. The training began in 2009 and over 150 Explosive Ordnance Disposal (EOD) and reconnaissance personnel from all branches of the military and across the ranks, from private to colonel, have attended class at LANL to learn about HME ingredients that may be commonly used in IEDs. At each training class, students learn about explosive by detonating several different types of homemade explosive. The Laboratory relies on the Open Burn permit to allow destruction of debris and residual material associated with these activities.

LOW-SMOKE PYROTECHNICS

In big fireworks displays shown at holiday events, a chemical called perchlorate is used to add oxygen fuel into many explosives and fireworks. Perchlorate also then floats from the explosion back to the ground, causing contamination, so scientists at the Laboratory won an R&D 100 award in 1998 for low-smoke pyrotechnics. At the time, their goal was to lower pollution content in flares and munitions used by the military. Near the same time frame, Disney asked the Laboratory to research a process for environmentally-friendly fireworks for its theme park shows. Through data gathered in open flame experiments, our scientists found that if you used a high nitrogen-based explosive, rather than high carbon-based, you could reduce smoke from the fireworks as well as minimize the amount of perchlorate used. As an added bonus, the resulting fireworks performed so well that less metals and chemical additives were needed to make them colorful. This is another example of valuable research at Los Alamos that uses the open-burn permit.

LIQUIDS ON COMMERCIAL AIRLINES

Everyone who flies commercial airlines has experienced the so-called 3-1-1 rule that allows (1) passenger to carry on board a (1) quart plastic bag of (3)-ounce bottles of liquids and gels. This rule was imposed after the summer of 2006 in response to a very real terrorism threat. What many have

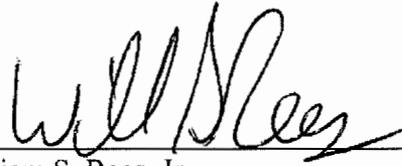
forgotten is that for a brief period no one was allowed to bring ANY liquids or gels on board aircraft.

LANL scientists were able to determine what quantities of liquids and gels could be safely allowed on board by doing the homemade explosives testing we do at Los Alamos.

CONCLUSION

At Los Alamos, we will continue to protect people and the environment while supporting the Laboratory's national security missions. Without the permit, missions like the detection, mitigation and defeat of HMEs and IEDs would cease.

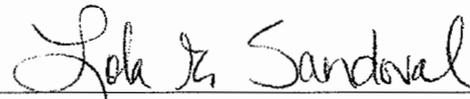
FURTHER AFFIANT SAYETH NAUGHT



William S. Rees, Jr.

STATE OF NEW MEXICO)
) ss.
COUNTY OF LOS ALAMOS)

SUBSCRIBED, SWORN TO AND ACKNOWLEDGED before me this 12th day of
March, 2010



NOTARY PUBLIC

My Commission Expires:

December 24, 2013