

October 1981

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PACIFIC NEWS SERVICE 604 Mission Street, room 1001 • San Francisco, California 94105 • (415) 986-5690

LX-09

PENTAGON DENIES LX-09 SAFETY HAZARD--

NUCLEAR WARHEADS THAT MIGHT ACCIDENTALLY EXPLODE BEING REPLACED--CAREFULLY

By Norman Solomon
Pacific News Service

EDITOR'S NOTE: Seven years after U.S. nuclear weapons scientists reported that an explosive substance used in nuclear warheads was highly volatile and subject to accidental detonation, the compound LX-09 remains in hundreds of American warheads, posing potential dangers of accidental plutonium scatter. Though the government denies there is a safety hazard, the Pentagon is gradually replacing the warheads, many of which will remain in deployment for three to five years, reports PNS correspondent Norman Solomon, author of a forthcoming book on the U.S. nuclear arsenal.

Seven years ago, government scientists working on the U.S. nuclear weapons program discovered the disconcerting fact that an explosive substance used in warhead construction was so unstable that it exploded half the times it was dropped from a height of less than one foot.

Three years after that discovery three workers at the Pantex nuclear weapons assembly plant near Amarillo, Texas, were killed when a worker, accidentally detonated the substance during normal machining procedures. After the accident, which caused \$2.5 million damage and hurled debris more than 320 feet, use of the plastic-bonded explosive was halted in 1977.

However, the substance, known as LX-09, remains in hundreds of nuclear warheads today, posing what some experts believe constitutes a very serious threat of accidental detonation and possible plutonium contamination of port cities in the United States and Europe.

Maj. Gen. William W. Hoover, the Department of Energy's director of military application, confirmed that "several hundred" nuclear warheads presently deployed on Poseidon submarines contain the volatile explosive.

Hoover said that the government has no safety concerns about the LX-09 warheads. He said it was only "a coincidence" that a special program was undertaken about one year after the fatal accident to gradually replace the Poseidon warheads with ones which do not contain LX-09.

Removal of the warheads is scheduled to take about six years. Hoover said some warheads containing LX-09 will remain in deployment for another "three to five years." He added that the phase-out of the LX-09 warheads is due to a "deterioration problem" with the explosive's bonding material, and not because of safety concerns. He

stressed that reliability of the LX-09 warheads as nuclear weapons will not be impaired during the remaining years of deployment.

However, an investigation supported by the Center for Investigative Reporting reveals that concerns over accidental detonation of the explosive have been expressed by scientists at the nation's nuclear weapons research laboratory at Livermore, California. A July³¹, 1974, summary of tests conducted by the Lawrence Livermore Laboratory concluded that "LX-09 displays some very undesirable properties....The reaction levels observed are generally quite high and independent of impact velocity. Thus, LX-09 exhibits both low-threshold velocity for reaction and rapid buildup to violent reaction. Any accidental mechanical ignition has a large probability of building to a violent deflagration or detonation."

In the aftermath of the 1977 Pantex accident, Livermore Laboratory deputy director Duane C. Sewell conceded in a "priority" memo to high ranking nuclear weapons program officials that the test which found the "very undesirable properties" in LX-09 was "closely related to weapons operational safety." Sewell went on to become DOE assistant secretary for defense programs.

If there were indeed a serious safety problem raised by the laboratory tests, and confirmed by the Pantex accident, the Pentagon faced a stark choice: either "recall" the LX-09 warheads for immediate replacement, or play down the significance of the problem and replace them over a gradual period. The first option would have meant a potential disruption to the deployment of some or all of the 19 Poseidon submarines which represent most of the present U.S. sea-based nuclear weapons capability.

"If it were true, you'd have to bring the warheads back," said senior staff scientist Tom Cochran of the Natural Resources Defense Council, an independent research group in Washington, D.C. "I would say that's very serious, and very disruptive to the military program."

However, if the Pentagon was concerned about the warheads it clearly permitted strategic deployment requirements to dictate the solution--gradual replacement.

The Poseidon submarines have routinely docked in Charleston, S.C.; New London, Conn.; Norfolk Va.; and Holy Loch, Scotland. They also dock occasionally at San Diego, Pearl Harbor and Bangor, Wash., according to a Navy spokesperson.

Some informed sources also believe that LX-09 warheads may have been deployed on other missile systems, including the ground-based Lance and the short-range attack missiles aboard B-52s and FB-111s. The Pentagon denies this.

Jerry Huff, Jr., executive editor of Amarillo's daily Globe-News and a long-time researcher of the nearby Pantex plant, where the warheads were manufactured, says he believes that between 1968 and March, 1977, "many of the warheads that were turned

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out contained LX-09."

Other informed sources estimate the number of deployed LX-09 warheads in the thousands.

In fact, purchase order records show that in 1973 and 1974 the government bought at least 20,000 pounds of LX-09 for use at Pantex. That is enough for production of several hundred warheads in those years alone. Fabrication of LX-09 for warheads continued until the accident in March, 1977. The substance was manufactured by the Holston Defense Corporation, a wholly-owned subsidiary of Eastman Kodak.

The safety concerns raised about accidental detonation of LX-09 do not extend to possible detonation of the nuclear material in the warhead itself. Rather, a detonation of the explosive could result in widespread dispersal of plutonium, which "could be a quite serious problem from a public health standpoint," said Dr. Edward Radford, chairman of the National Academy of Science's latest committee on radiation effects. Cancer of lungs and bone marrow could be among the long term health effects, he said.

In addition, an accidental detonation inside a warhead could be of immediate danger to the 140 crew members aboard Poseidon submarines. If a detonation occurred while a submarine was in port, plutonium contamination of residents in the vicinity could be severe.

Perhaps the most outspoken critic of the continued deployment of the LX-09 warheads is Dr. Melvin D. Morgan, a Dallas physician and attorney for relatives of the three men killed at the Pantex plant in 1977. (On October 1 a U.S. District Court in Amarillo dismissed the suit by the dead workers' relatives on technical legal grounds.)

Morgan, who has uncovered much of the evidence about LX-09, said he was "personally horrified" to learn details of LX-09's role in weapons production. His long involvement in the legal proceedings on the fatal LX-09 blast has convinced him that the government "covered up" a potential "major disaster." "Everything I have seen leads me to believe that LX-09 is not safe to have in a warhead," he said.

Alex DeVolpi, an author and physicist at the Argonne National Laboratory, said he could "see why people would be very nervous about LX-09" after he reviewed the test results on the substance at the request of Pacific News Service. "The public has a legitimate concern about the safety of nuclear weapons," he added, "particularly because of the potential hazard associated with possible accidental detonation. Without giving away technical details that could be improperly applied, the general information should be made available in order to satisfy this type of inquiry."

Last March, Defense Dept. official James P. Wade, Jr., testified before a congressional committee on the need to "extend our effort to minimize plutonium dispersal hazards... (and) address explosive safety for the stockpile as a whole."

The statement echoed earlier Pentagon pledges to reduce the possibilities of accidental detonations in warheads following a 1966 incident in which explosions occurred inside two nuclear warheads and scattered plutonium over 640 acres in Spain.

The Defense Department admits to 32 major accidents involving nuclear weapons, including nine which involved detonation of high explosives in the warheads.

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