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HOUSTON CHRONICLE ARCHIVES

Paper: Houston Post

Date: SUN 05/03/92

Section: National

Page: A1

Edition: FINAL

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MX MISSILE SERIOUSLY FLAWEDFASTENERS MAY PROVE UNRELIABLEFEDERAL INDICTMENT LISTS 34 COMPANIES

By *FRANK BASS*, OF THE HOUSTON POST STAFF

The most powerful nuclear weapons system in the world is suspected of having problems that could either prevent its missiles from being launched or send them careening wildly off target.

When the 50 MX "Peacekeeper" missiles were built and installed in silos near Warren Air Force Base, Wyo., they were hailed as a symbol of U.S. resolve during some of the darkest days of the Cold War.

But the missiles, which first became part of the nuclear balance of power in 1986, may be the nuclear Potemkin Village - a fearsome threat on paper, but potentially worthless in an all-out nuclear exchange.

A five-month investigation by The Houston Post - based on extensive research of public documents dealing with nuclear weapons and interviews with industry officials, nuclear warfare experts, prosecutors and military officials - discovered significant problems with the missiles.

The Post found:

A federal grand jury has indicted 34 fastener companies on charges that they supplied substandard bolts to the primary communications system for the U.S. nuclear arsenal. The system would send launch codes allowing missiles to be launched in a nuclear war.

The suspected problems extend beyond the ground-based communications network. Indeed, sources familiar with the probe fear a missile launch could result in an explosion within the silo. While the blast wouldn't produce a nuclear explosion, radioactive contamination would be extensive.

Investigators are also studying the missile itself for substandard nuts and bolts that connect its various stages. If the missile were ever launched, sources familiar with the investigation contend its stages might not properly separate. The result could be a nuclear explosion over a non-targeted part of the Northern Hemisphere.

The sealed indictments were issued last year and kept secret by the government

because of the ongoing investigation. But two companies have already submitted guilty pleas. Hayes Bolt and Supply Inc. of San Diego pleaded guilty on Jan. 29 to charges that it used commercial grade hardware products in the missile system. Alatec Products Inc., a North Hollywood, Calif., firm, pleaded guilty on March 13 to similar charges.

Hayes could be fined \$500,000 and barred from ever doing business with the government again. Alatec faces a fine of \$1 million and the same prohibition.

Sentencing is pending.

The 34 indictments contend that a 2,200-mile-long system of underground cables called the Hardened Intersite Connect System (HICS) is flawed. The cables, which are one means of transmitting launch codes in a nuclear war, are spliced together by 16,000 assembly boxes. The boxes, in turn, are held together by nuts and bolts.

If the fasteners failed - and some 90 percent taken from inventory samples failed chemical composition tests, according to sources - investigators believe that water could seep into the boxes.

The communications network is highly redundant, but in a worst-case scenario, a breakdown could prevent individual silos from receiving commands and make the missiles all but worthless.

Bruce Blair, a defense analyst with the Washington, D.C.-based Brookings Institution, said the underground web of cables is designed to find a "back door" to each missile in a 50-missile squadron if part of it is knocked out. But he said the failure of even part of the system could pose significant problems under any circumstances.

"Those cables are an essential lifeline for launching missiles in time of war," he said. "They're also essentially a means of monitoring the missiles in peacetime. The stakes are, on one hand, a potentially serious degradation of the ground command centers to fire the nuclear weapons. . . . Secondly, and more importantly, a serious degradation of this network could compromise the safety of the forces, the ability of the system to maintain ironclad safeguards against unauthorized use."

Sources familiar with the investigation also believe the missiles may face risks from substandard fasteners in the parts used to launch them. Unlike other missiles in the U.S. nuclear arsenal, the MX has a "cold launch" system that hurls it from its silo atop a pillar of steam.

Older systems - such as the Minuteman-3, which remains the mainstay of the U.S. arsenal - rely upon a "hot launch," with the missile engines launching from the silo itself.

The MX and most former Soviet missiles, which also rely on the cold launch system, are pushed about 100 feet out of the silo before their engines fire. The cold launch prevents the silo interior from being badly burned and could theoretically give the Air Force a shot at loading and launching more missiles from the same silo.

Investigators, however, suspect at least 60 percent of the fasteners holding the cold launch system together could shear or break if the missiles were ever launched. Instead of being pushed out of the silo, the missiles likely would rattle around inside before exploding.

Such an explosion at the very least could blast radioactive material over large areas of the northern Great Plains, contaminating the environment for thousands of years.

Sources familiar with the probe also believe different parts of the four-stage missiles may be improperly connected. If the fasteners that connect stages were to fail, a fully armed missile could plunge prematurely to the ground in the northern Plains, Canada, the Arctic Circle or a part of the former Soviet Union that had not been targeted.

Blair, however, said the chances of a premature nuclear detonation are unlikely. The missile is automatically armed after it re-enters the Earth's atmosphere at a certain speed and reaches a specified barometric pressure.

Richard Stacy, U.S. attorney for Wyoming, had few specifics to offer about the investigation. The indictments, however, were issued in secret because the probe surrounding the missiles continues, he said. The secret indictments could mean that more charges are pending, said a source familiar with the case.

"Our investigation continues," Stacy said. "Since the investigation is ongoing, I'm really reluctant to get into the nitty-gritty details at this time. That's about all I can tell you."

A Warren AFB spokesman said Air Force officials there are aware of the investigation, but don't believe the problems discovered so far pose any dangers to the Peacekeeper.

Suzanne Dukes, the president of Hayes, said the company considered fighting the charges. But the cost of an adequate defense, she said, would have far outweighed a \$5,000 fine that the government has proposed in return for the company's cooperation in the continuing investigation of problems with the MX missile.

"There were absolutely no failures" in the fasteners, she said. "It was basically paperwork interpretation. We could not basically afford the hit on our company to defend ourselves appropriately, but we felt we had a very strong case."

Donald List, president of Alatec, didn't return telephone calls.

Industry sources differed on the dangers of substandard fasteners. One official who declined to be identified said he hopes awareness of the MX investigation will spur a White House panel to quicker action in setting standards that will shut down unscrupulous businesses.

"If you're in the fastener industry," he said, "you know who you are."

The Fastener Advisory Committee was created after Congress passed the Fastener Quality Act of 1990. The 16-member committee, however, hasn't developed the standards needed to enforce the law yet, and one official concedes it probably won't be finished with its work until 1993.

Members of the panel, however, have said that the mere passage of the legislation already has raised awareness about the problem. Bill Hayes, an industry member on the committee and president of Hawaii Nut & Bolt, said he doubts substandard fasteners pose widespread dangers.

"Everyone talks about bad bolts," he said, "But no one can show me any failures. . . I want every single part in this world to be proper. That's my bottom line."

One source familiar with the investigation, however, said he believes the Air Force probably wouldn't replace bad parts found in any section of the missile system.

"The Air Force has pretty much decided that even if all the fasteners are bad, very few of them would have to be replaced," he said. "Where one bolt would do, they've probably got three. So chances are, there's no great threat."

It is also unlikely that the problems with the MX missile would affect U.S. strategic planning at the end of the 45-year Cold War. Indeed, hard questions exist about how much thought would be given to malfunctioning missiles or troubled communications systems in the midst of a nuclear war.

But the issue of the Pentagon's use of billions in taxpayer dollars on projects thought to have serious flaws since their inception is a very real problem, said a congressional aide to Rep. James Bilbray, a Nevada Democrat who sits on the House Armed Services Committee.

"This is just a continuation of a bad track record by the military when it comes to the quality of parts in weapons systems," said Mike Talisnik. "You can name practically any military weapons system that we have . . . and it's had some defective part in the system."

The MX missiles were built at a cost of \$100 million each and cost \$2.6 million annually to maintain. Sources familiar with the investigation said \$300,000 has been spent so far on testing bolts in the system.

The indictments are only the latest concern about the missile, which began development in the 1960s. The missiles, which carry 10 multiple independently targetable re-entry vehicles (MIRVs, or separate warheads that can be guided to their targets during flight) each, were the subject of a 1986 FBI investigation into cost overruns by the Northrop Corp. The Century City, Calif.-based company was accused of designing faulty navigational units for the missiles.

The Air Force also was forced to withhold bonus payments in 1987 to Morton Thiokol, the contractor for its first-stage engine. Five people were killed in Brigham City, Utah, while working on the engines.

In June 1988, the Air Force took warheads off five missiles after one fell about 6 to 12 inches, into the launch vat. The missile was extensively damaged, according to the Pentagon.

Most recently, President Bush offered in tentative arms talks to scrap plans to place the MX missiles on mobile launch platforms. The proposal, which was offered to former Soviet President Mikhail Gorbachev, is still pending.

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