

'Dense pack' basing idea may be last chance for the MX

By Bruce Ingersoll

WASHINGTON—Periodically for the last six years, the MX missile has been a waif of the nuclear age, a weapon without a home. To the Air Force's frustration, one MX-basing scheme after another has been discarded for technical and political reasons.

Pentagon technocrats have considered stowing the nuclear-tipped MX in trenches, submerging it in pools of tinted water, putting it aboard trains, planes, barges, ships and submersibles, even shuttling it around a "race-track" from one underground garage to another, all to keep the Soviets guessing where it's hidden.

Early this year, scheme No. 32 came to the fore. The Air Force calls it "closely spaced basing," or "dense pack." Critics already are deriding it as "dunce pack."

Unquestionably, dense pack borders on the bizarre. It is as arcane as any scheme yet advanced. Whether it flies or crashes out of favor depends on the outcome of scientific debate now raging and the reaction on Capitol Hill.

Under the \$28-billion dense pack plan, 100 MXs would be packed into a corridor about one mile wide and 12 miles long. Each underground MX silo would be super-hardened with steel and concrete to withstand nuclear shocks and shivers. Were the Soviets to attack, they would have to funnel their warheads into this narrow corridor.

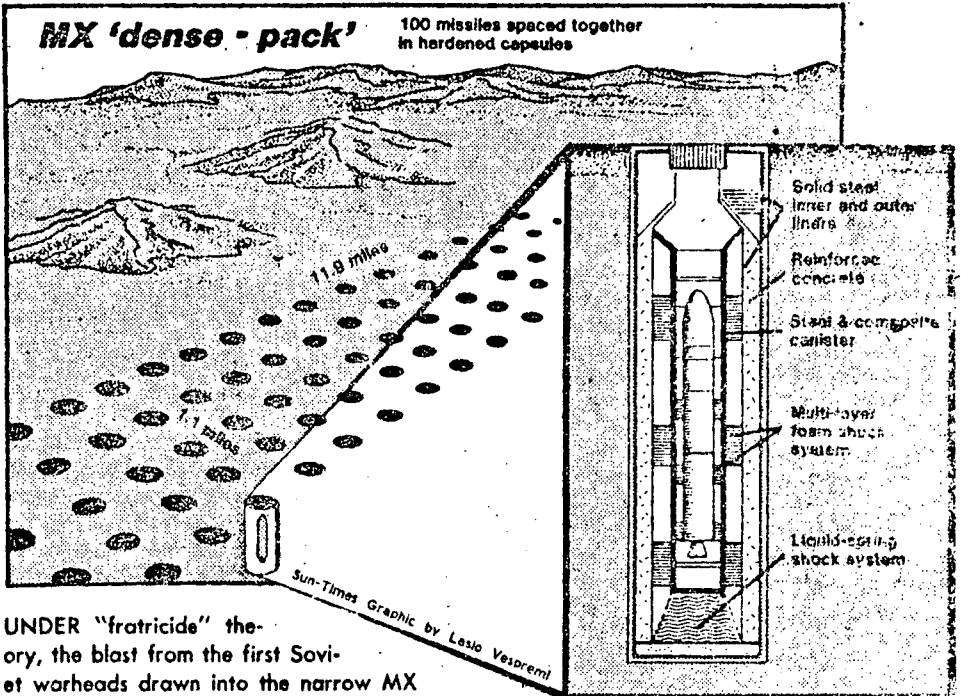
The first Soviet warheads to detonate would create so much havoc that they would destroy the following warheads or deflect them off-target, or so the theory of "fratricide" goes. The horrendous explosions—each bigger than the Hiroshima atomic blast of 1945—would throw a shield of gamma radiation, neutrons, heat, shock waves, dust and debris over the rest of the MX corridor.

The Air Force stoutly believes a haven can be found in havoc. It would be only temporary—one hour or so—but it would give the United States time to retaliate with the surviving MXs.

Disbelievers, however, are troubled by all the uncertainties inherent in fratricide. They wonder where nuclear physics ends and nuclear theology begins. They can envision the Soviets developing tactics and technology to defeat dense pack.

Congress has given President Reagan until Dec. 1 to decide what to do with the homeless MX. It rejected his interim proposal to put it temporarily in existing missile silos until a survivable basing system can be found.

At this juncture, dense pack appears to be the president's only option. "It's a strong horse in the race," said a Pentagon source. "In fact, I think it's the only



UNDER "fratricide" theory, the blast from the first Soviet warheads drawn into the narrow MX corridor would disable the warheads that followed, giving the U.S. time to retaliate with surviving MXs, protected in "hardened" silos. Critics of the plan believe the Soviets will develop technology to avert fratricide.

horse."

For Reagan, the MX decision could very well be the most momentous of his presidency. It will shape the nation's nuclear-deterrent strategy well into the 21st century and bear directly on the outcome of the strategic arms reductions talks.

MORE THAN national security is at stake, however. Reagan has invested a lot of political capital in his pledge to close the U.S. "window of vulnerability" to a Soviet nuclear attack, and now he must make good on it. The MX will be a 96-ton albatross around his neck, a political liability, until he finds it a satisfactory home.

Also riding on his decision are billions in defense contracts. Martin Marietta, the prime contractor on the MX, stands to gain the most. About \$4.5 billion already has been spent on the missile's design and development and on basing studies.

There is a growing consensus in Washington that the MX will be doomed to oblivion if an acceptable basing system is not found soon. Defense Secretary Caspar W. Weinberger has described dense pack as "our last time at bat."

The Air Force already is sending designated hitters to the plate to face the best pitching of dense pack's detractors. The opposing lineup is formidable.

Former President Jimmy Carter, whose "shell game" plan for hiding 200 MXs in 4,600 shelters in Nevada and Utah was

rejected by Reagan, has dismissed the latest scheme as "ridiculous."

William Perry, former undersecretary of defense for research and engineering under Carter, said it would be a "stopgap measure" at best. "No deployment of missiles at fixed, known locations is survivable," Perry asserted recently.

Retired Adm. Stansfield Turner, Carter's Central Intelligence Agency director, likened the proposed corridor of MX silos to France's Maginot Line of defensive belwarks. The Soviets would be able to find a way around the fratricide problem just as the German Panzer divisions swept around the Maginot Line, he argued.

Sen. Gary Hart (D-Colo.), an influential member of the Armed Services Committee, contended that dense pack probably would be unworkable and thus would destabilize the balance of nuclear terror.

Even retired Air Force Lt. Gen. Brent Scowcroft, a Reagan supporter, has similar misgivings. "I don't know whether dense pack will work or not," he said. "It may be subject to catastrophic failure."

AT LEAST THREE grave threats already have been envisioned by strategic planners and nuclear physicists:

- The Soviets might be able to "pin down" the MX force for the first few hours of a

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nuclear war by detonating a series of small nuclear explosions 60 to 120 miles above the missile silos. Submarine-launched missiles could be used for this purpose.

The Soviets could use their enormous SS-18 missiles to hurl five-megaton or bigger warheads at the MX corridor. A surface burst "at one silo would put the adjacent silos at the lip of the crater," said physicist Richard L. Garwin.

"In no way does dense pack provide enduring survivability," he said. "Clearly, the Soviets could attack 20 percent of the silos in one wave, following after 30 minutes or so with another wave, and thus destroy the entire cluster in about three hours."

They also could develop earth-penetrating warheads and sow the ground of the MX corridor with them. To avoid fratricide, they could time these warheads to go off simultaneously.

"By putting the MX on land we're creating extremely high-value targets which are essentially undefendable," said another physicist, Sidney Drell. "It would be far more sensible to expand the sea-based deterrent. Our submarine missile force is highly survivable and we can give it every characteristic that we can design into a land-based system—reliable command and control and high accuracy."

There is also the problem of radioactive fallout from all the ground bursts.

"I do not see that providing the Soviets with a big fat target which will create an

astronomical amount of fall-out, which will kill millions and millions of Americans, is a very sound way of providing defense," said Adm. Thomas Moorer, former chairman of the Joint Chiefs of Staff.

Retired Adm. Gene R. LaRocque finds it troubling that the fratricide concept is purely theoretical, totally untried. "There's never been two nuclear test shots at the same time, atmospheric or underground," he said. "I'd like to see the theory tested before we spend \$25 billion on dense pack."

The Air Force's comeback is that the uncertainties are just as challenging for the Soviets as they are for U.S. scientists. Its strategic planners believe that the problem of timing warheads to hit their targets within microseconds will stymie them for years.

By building the silos 1,800 to 2,200 feet apart and hardening them to withstand blast pressures up to 10,000 pounds per square inch—5 pounds will flatten a frame house—they maintain that 50 to 70 MXs in 100 would be able to ride out any conceivable Soviet attack.

The Air Force plan is to deploy the first 10 missiles by the end of 1986 and the rest by mid-1989, most likely on a military base in the Southwest.

The dense pack, at \$28 billion for 100 missiles and \$34 billion for 200, would be cheaper than Carter's \$41-billion shell game with 200 MXs. It also is far more politically palatable. The corridor would take up no more than 15 square miles,

whereas the shell game would have swallowed 1,000 times more land.

"W E FEEL THE basic system... is reasonably survivable at least through the early to mid-1990s," said a Defense Department source. "This gives us ample time to watch [the enemy's] test programs, and if we see that he's developing methods to defeat it, there are things we can do to further complicate the problem for him."

Silo hardness could be enhanced, he said. As many as five silos could be added for each MX, enabling the Air Force to baffle the enemy by moving the missiles around. In addition to "deceptive basing," a ballistic missile defense system could be deployed to intercept and kill incoming Soviet warheads.

More MXs, if necessary, could be stashed deep inside mesas or mountains as a "secure reserve of weapons," he said. With mining augurs or moles, these missiles would tunnel their way to the surface for launching.

The four-stage MX is tentatively set to make its first flight Jan. 28 at Vandenberg Air Force Base, Calif. Even if it soars skyward perfectly, it may not fly in Congress.

"If critics can find a type of attack that would defeat dense pack, the Soviets could, too, rendering MX worse than worthless: a lucrative, vulnerable target that would be an incentive for a Soviet first strike," said a congressional researcher.

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SENATE APPROPRIATIONS WANTS ASW STANDOFF AND SUBROC

The Senate Appropriations Committee is supporting the Navy's price-restructured anti-submarine warfare standoff weapon (ASWSW) but also wants prolonged use of—and perhaps a life extension program for—the Subroc ASW system.

The Navy combined ASWSW and the Vertical Launch ASROC system last year, emerging with a Common ASW Standoff Weapon concept for use from surface ships as well as submarines.

Last spring, however, the Navy decided this would be "unaffordable," the committee noted in reporting on its FY 1983 defense money bill, so it resurrected both programs. But new budget profiles for ASWSW indicate "a major slip in the development schedule unless immediate changes are made in the program," the committee added without elaboration.

Voting a \$38 million ASWSW budget for FY '83, instead of \$42 million requested originally for the common weapon, the committee told the Navy to report by December 15 on firm outyear funding for ASWSW.

It also noted ASWSW delays in asking again that the Navy report on the feasibility of a Subroc life extension improvement program. It voted to add \$11 million to make attack submarines capable of using Subroc even after they have been equipped with Tomahawk cruise missiles, and it said it is "concerned that the Navy has failed to accelerate a suitable developmental replacement for Subroc."