Congress Challenges MX Basing Plan

The Air Force has redrawn the "racetrack" to save space, but resists further tinkering with the design

Pressured by congressmen from Utah and Nevada, the Air Force has scrapped the "racetrack" basing plan for the MX missile and substituted a new scheme that will cost $2 billion less and require 20 percent less land. But in announcing this shift of policy on 6 May, William Perry, Under Secretary of Defense for Research and Engineering, told Congress there is no time left for dawdling over the MX. Any delay beyond September in approving the program will impose a month-for-month delay in making it operational. The Air Force expects to have the first MX in place by 1986, and the entire base constructed by 1989. The cost, it is estimated, will be at least $33 billion in 1980 dollars.

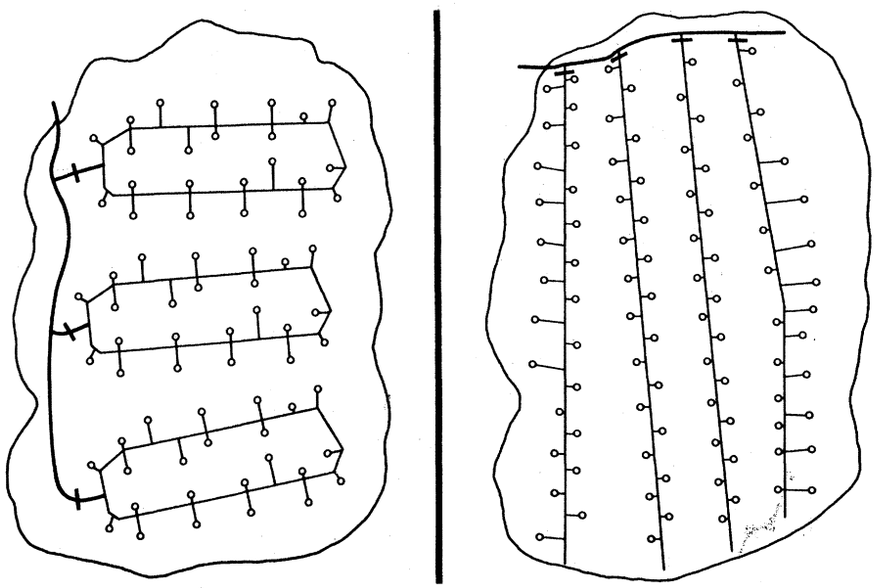
Timing is critical, Perry said, because improved guidance devices being installed in Soviet missiles will soon give the Soviets the ability to target and possibly destroy most of America's existing land-based strategic missiles in a first strike. The new mobile MX is supposed to nullify that targeting threat by the late 1980's.

The plan for the MX, always controversial because of its cost and complexity, has run into unexpected trouble this year with the Southwesterners who will have to live with it. The Air Force was counting on the people of Nevada and Utah to welcome the project, but they have not. Instead they have become highly skeptical of the government's promise that the billions of dollars poured into this construction project will improve, not destroy, the quality of life in their states.

Perry made a vigorous defense of the basing plan in hearings on 6 May before the Senate Appropriations Subcommittee on Military Construction. Defense Secretary Harold Brown spoke briefly as well, emphasizing the need for strengthening nuclear forces on land, rather than at sea. And Air Force Under Secretary Antonia Chayes described how the Department of Defense (DOD) planned to contain the disruptive effects of what is being called the world's largest construction project. She said, for example, that the DOD may follow the model used for U.S. military projects in Saudi Arabia, where great care is taken to seal "corrupting" Western ways within camps that have little contact with the conservative society outside. The analogy seems apt.

Senator Jake Garn (R-Utah), after listening to Chayes's testimony, said statistics cannot convey the magnitude of the impact the MX will have. Garn does not want to delay construction "one minute," but the project "will affect our states forever. It will change the lifestyle there," he said. People in Washington, D.C., don't know what it is like to live in a desolate rural area, where a mayor earns $50 a month and where a single new business in town upsets the equilibrium. "Maybe we should put the MX in Washington, D.C.," Garn suggested, because nobody would notice the intrusion.

The hearings, nominally chaired by Senator Walter Huddleston (D-Ky.), were called for the benefit of Garn and Senator Paul Laxalt (R-Nev.), who jointly have waged a campaign to spread some of the burden of MX deployment to other states. They ran the show. Garn, ironically, was one of the senators who pushed the Administration hard for a commitment to build the MX. Now that the missiles have come home to roost (about 30 percent of them may be put in Utah), he would like to shoo them away. Garn and Laxalt are responding to worried constituents, who fear that the 30,000 or so construction workers needed for the project will bring with them a low life that has not yet penetrated the deserts of the Southwest.



In the original plan, the MX missile was to have been deployed on 200 loops or racetracks (left). A more efficient plan (right) uses a network of linear roads, occupying less land.

This sort of concern prompted the Air Force to simplify the design of the MX missile transporters and alter the roadway on which they will run. The missiles will not be trundled around a loop or "racetrack" with 23 concrete shelters, as planned at first, but on a linear road (see drawing). The transporter-launcher will be lighter, and it will no longer have the capability to "dash" automatically from within one shelter to another on notice of a Soviet missile launch. Instead, it will be stationed on the deployment road during a time of crisis and sent to dash from the road to a shelter if Soviet missiles are launched. These changes make it possible to build smaller shelters and pack more shelters into each desert valley.

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The senators were pleased but not placated by the DOD's shift in design. Garn said it is still "essential" that the Air Force review in earnest the concept of split basing, which would place some of the MX missiles in states such as Texas and New Mexico, or possibly on submarines at sea. He made Secretary Brown promise that the study would not be done in a "half-hearted" way. "We are willing to bear our fair share of the burden," Garn said, but the present basing scheme seems to demand more than that. Both senators took pains to point out that they were not objecting for antimilitary or anti-MX reasons but out of sheer parochial self-interest. Laxalt said that his state would be happy to make sacrifices for the rest of the nation, but it would do so only if (i) the least disruptive basing design is used, (ii) part of the system is moved elsewhere, and (iii) federal economic compensation is given "in sufficient quantities to cushion remaining difficulties." The Southwesterners are thinking in figures of $1 billion and up. Laxalt's experience, he said, informed him that it is unlikely that the MX project will be completed within the time or cost limitations cited by the DOD.

Although it would be technically feasible to put some of the missiles in New Mexico and Texas, Perry said, this split basing approach would add significant new costs because it would require additional command and communication facilities. The Pentagon expects to recommend that Congress *not* push for this option, but limit the MX to Nevada and Utah. Perry and Brown ruled out all the other alternatives the Southwesterners had suggested.

Vertical shelters, which demand less land than the chosen horizontal type, were dropped because they require an elaborate and time-consuming method of missile transport and emplacement. They would not allow for a quick reconfiguration or shuffle of missiles within shelters, as might be necessary in a time of crisis. Airplane basing was ruled out because it would require planes with heavier armor plating (and thus more power) than the present fleet, making it an unacceptably expensive choice.

Most attention was given to the alternative with the best credentials, known as the shallow underwater missile (SUM) concept, proposed by Richard Garwin of IBM and Sidney Drell, deputy director of the Stanford Linear Accelerator Center (*Science*, 12 October 1979). According to the SUM plan, missiles would be placed in submersible launching tubes and mounted on the outside of 50 to 100 small diesel-electric submarines, which would patrol in shallow depths just beyond the U.S. continental shelf. These small subs, the proponents claim, would be more difficult for the Soviets to find and hit than the giant Trident submarines. (The small subs would augment, not replace, present seaborne strategic forces.) Air Force spokesmen have criticized the concept informally for the last 2 years, but Drell charged in these hearings that the DOD has never conducted a thorough technical analysis of the idea.

Secretary Brown dismissed SUM for two reasons. By shifting the MX from land to sea, he said, America would effectively give up hope of improving its land-based missiles and concede "an important perceptual advantage to the Soviets, a dangerously misleading signal." Second, Brown said that taking this step would be tantamount to abandoning the triad of strategic forces (bombers, land-based missiles, and submarines) for a dyad of submarines and bombers. This would simplify the technical task the Soviets would confront if they wished to launch a first strike against these missiles. Brown added that although he can guarantee that American submarines will be untargetable through the 1980's, there can be no such guarantee for the 1990's. In addition, the DOD attacked the small submarines in a brief report issued on 9 April ("An Evaluation of the Shallow Underwater Missile Concept"). It found that "SUM is unlikely to be cheaper than MX" on land, and "SUM is unlikely to be available before the 1990's."

Cost estimates for a new weapon are notoriously unreliable, particularly when they are being put forward by advocates of competing systems. Drell claims that the DOD has overestimated the cost of SUM by at least $10 billion, larding the system with unnecessarily large figures for research, development, and basing. The senators wisely declined to get into this part of the debate, declaring themselves skeptical of both the DOD's and Drell's estimates. But it is safe to say that SUM would be no more costly than a land-based MX.

Drell said he "searched in vain for an analytic basis" supporting the DOD's conclusion that the submarine system

Roll with Coal

A rare note of optimism about the world's energy future is sounded in an international report produced under the direction of Carroll L. Wilson of Massachusetts Institute of Technology.

Oil is likely to become less available over the next two decades, and nuclear and alternative sources of energy will not be sufficient to meet the world's growing energy needs. But a solution is at hand: "Coal can provide the principal part of the additional energy needs of the next two decades," conclude the participants of the World Coal Study.*

To achieve this goal, world coal production will have to increase by 2.5 to 3 times, and world trade in coal will rise by an order of magnitude. The United States, which possesses the largest economically and technically recoverable coal reserves in the world, will become a major exporter.

A less upbeat view of the future of coal, at least in the near-term future, is presented by the National Coal Association in its 7 May annual report to the President. Total demand for U.S. coal will be between 880 and 1080 million tons by 1985, compared with the goal of 1200 million tons by 1985 called for in the President's April 1977 energy message. The reason for the shortfall, complains the National Coal Association, is that "A complex web of government policies and requirements is now holding down coal demand." The NCA would like to see environmental and other standards rolled back.

The World Coal Study is less critical of the government's role, believing that existing market forces are compelling enough to bring more coal on stream at the right rate. "We believe that regulatory standards can be complied with at costs which keep coal economic," says J. Michael Gallagher of MIT, the study's technical director. As for the climatic consequences of increased coal use, the study takes the position that "present knowledge of possible carbon dioxide effects on climate does not justify delaying the expansion of coal use."—N.W.

**Coal—Bridge to the Future.* World Coal Study. Ballinger Publishing Company, Cambridge, Mass. 248 pages.

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could not be ready until 1990, "but found none at all." He pointed out that the Polaris nuclear submarine was built from scratch and put to sea within 4 years, and "the entire nuclear submarine revolution from the 1949 go-ahead . . . to the first deployment of the first Polaris SSBN boat in 1960 required only 11 years." Development of SUM, he maintains, is far less challenging technologically than these early projects were. If we begin now, Drell thinks, there is no reason why it should take a decade to complete the task.

Drell also challenged the DOD's chief argument—that moving the MX to sea would eliminate one leg of the strategic triad and make it easier for the Soviets to devise a first-strike attack. It is not important that America's newest strategic weapon be placed on land, but it is important that it be different from existing systems and able to survive. SUM, Drell believes, meets these standards and adds diversity to U.S. strategic forces. It would complicate the Soviets' targeting problem, he claims. Because the small submarines would be so numerous, they would be difficult to trail. They would also be quieter and slower than the existing missile-bearing subs, and thus less likely to be spotted, even if antisubmarine technology is improved. The Defense Department has no analytic basis, according to Drell, for claiming that the triad would be more vulnerable with the MX underwater rather than on land.

These hearings were inconclusive in that the senators neither endorsed nor rejected the new format for a land-based MX, revised at the last moment by harried Air Force planners. They made clear, however, that despite the warning about the importance of moving quickly, they will be prepared to cause delays if they find the Administration to be uncooperative. It remains to be seen whether—or at what price—Utah and Nevada will go along with this unwelcome construction project.—ELIOT MARSHALL

Gus Speth, Planning the "Conserver Society"

As chairman of the President's Council on Environmental Quality, Speth loses as often as he wins in White House policy debates; but he has a vision for tomorrow

In light of the antiregulatory mood widely perceived to exist in Congress and elsewhere in the land, many environmentalists are in a beleaguered state of mind. They see, in the decade ahead, a cold war between themselves and those proponents of economic growth and rapid energy development who would rollback environmental regulation.

But Gus Speth, the new chairman of the President's Council on Environmental Quality (CEQ), believes that the 1980's can be a time of major advances for the environmental movement—if the movement adopts the strategies necessary to build broad-based political coalitions, increase grass roots organizing "by a hundredfold," and curb the political power of corporations through such measures as partial public financing of Senate and House elections.

Speth has, as indicated by some of his recent speeches before environmental groups, been emerging as the Carter Administration's advocate and planner for a "conserver society" that is committed to "doing more with less."

The conserver society, he says, "celebrates economy in design and avoidance of waste. It realizes that there are limits to low cost resources and to the environment's carrying capacity. It insists that market prices reflect all costs, social as well as private. . . . It prizes recycling over pollution, durability over obsolescence, quality over quantity, diversity over uniformity. It knows," he says, "that 'the best things in life are free.' "

Speth, who before joining the Administration in 1977 had built a reputation as a pioneer in environmental law, may enjoy higher standing with the environmental community than any other federal official. He might, in fact, be termed the Administration's "environmental conscience," and, if the White House is not always faithful to its conscience, environmentalists do not fault Speth on that account.

Speth's friends know that he represents but one side—although not necessarily an insignificant side—of the Carter Administration's divided state of mind with respect to a whole range of energy-and-environment issues. Some of these issues are of vital importance, and their outcome could have a lot to do with what life in the United States will be like in the next century. Accordingly, it is in order to look at how Speth and CEQ fit in the scheme of things in the Carter Administration and at what they represent as a source of ideas and policy direction for the future.

President Carter has sent two environmental messages to Congress during his first term, and Speth, from his conversations with the President, is convinced that he is a committed environmentalist. On the other hand, as Speth well knows, the themes of the conserver society clearly are not today controlling ones at the White House, which is being buffeted by worries about energy supplies and double-digit inflation, not to mention Ronald Reagan's skill at exploiting popular resentment against big government and federal regulation.

Speth has become increasingly well regarded at the White House since the President appointed him to the CEQ chairmanship last August. But his advice has often been rejected, especially on issues that turn in one way or another on the Administration's concern to reduce oil imports.

For instance, Speth and CEQ were unsuccessful in trying last summer to persuade Carter not to propose a massive $88-billion crash synfuels program. And, just recently, CEQ failed to persuade the President to include in his subsidy proposal for converting oil-fired utility boilers to coal the condition that there not be an overall increase in sulfur emissions. And, on a number of other issues, the President's decisions have gone against CEQ's advice; this was the case, for example, when Carter decided (as an anti-inflation measure) to allow the harvesting of timber in the national forests to exceed sustainable yields, and when he chose not to veto the congressional override of action taken under the Endangered Species Act to stop the Tellico Dam project.

But Speth, an individual of natural ebullience and little cynicism, can cite a

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