WHAT THE TREATY WITH RUSSIA DOES TO U.S. DEFENSES

System to safeguard U. S. against nuclear attack has undergone extensive change. Here are details of the new plan, and how it will work.

Under the agreement reached between the U. S. and Russia on deployment of defensive missiles, the American system has been reduced to a shadow of its original concept.

In practical terms, the results are—

- The U. S. is permitted to build Safeguard antiballistic missiles (ABM) installations on only two sites—rather than the 12 locations once deemed necessary for protection from nuclear attack. Under present planning, only one of those two sites is likely to be finally equipped with Safeguard.
- Left unprotected—unless plans for the system change—will be the vital command center of the nation's defenses in Washington, D. C., as well as eight of the country's nine missile fields—containing 854 of the arsenal of 1,054 land-based strategic missiles.
- On the financial side, an investment of upward of 1 billion dollars may have to be written off as construction is abandoned on other Safeguard sites.

The original plan. Safeguard now scarcely resembles the sophisticated network of radars and antiballistic weapons the Defense Department set out to build three years ago.

At that time, the plan called for a series of 12 sites around the country, each equipped to knock down enemy warheads, using radars and nuclear-tipped antiballistic missiles.

Instead, Safeguard—in effect—has been pruned to a single site protecting 200 Minuteman missiles at Grand Forks Air Force Base in North Dakota.

Defense officials insist that this system, where it is put into operation, can do the job it is designed for. How it is supposed to work in event of an attack is outlined on page 33.

Under way now—. The big shift on Safeguard came about through President Nixon's historic conference with Russian leaders in May, 1972.

Before the ABM treaty was signed, the Defense Department had planned to continue work this year on two Safeguard sites, to begin construction on two additional sites, and to start preparations for construction of a fifth complex to protect the Washington, D. C., area.

The treaty with the Russians, however, limited each country to two ABM installations. One of these, by terms of the treaty, had to be in the area of the country's capital.

Now Congress is moving toward doing away with the capital-area site, leaving the U. S. only the one Safeguard complex at Grand Forks.

Senator John Stennis (Dem.), of Mississippi, chairman of the Armed Services Committee, announced in August that Senate and House members conferring on the defense-authorization bill had voted to eliminate the Safeguard site for the nation's capital.

That means, the Senator said, that any consideration of the Washington facility is out for this year—and will remain out unless the Administration comes back next year with another money request.

What is Safeguard? The lone remaining Safeguard site at Grand Forks is expected to become operational in October, 1974. So far, about 2.7 billion dollars has been spent on construction, and another 3.3 billion will be needed to complete the installation at the North Dakota air base.

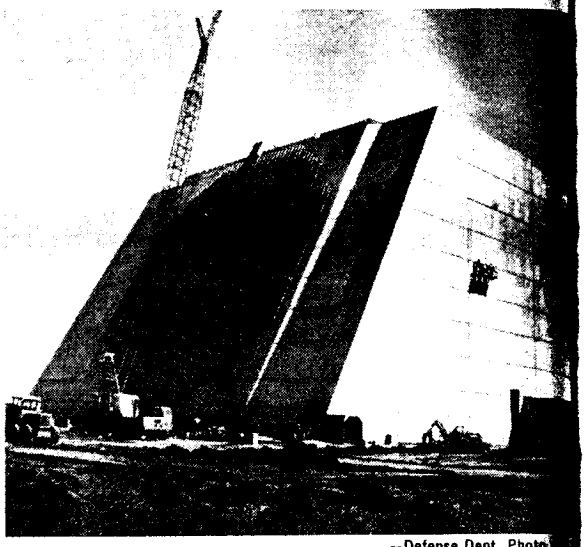
The complex at Grand Forks consists of a building, 120 feet high, to house the long-distance, missile-tracking perimeter acquisition radar (PAR); a smaller building for the more-discriminating missile-site radar (MSR); a nearby field of long-range Spartan missiles and the short-range, faster Sprint missiles. In addition, there will be four isolated fields of Sprint missiles.

The PAR radar is designed to spot incoming enemy missiles and alert the MSR network. The MSR, in turn, tracks the missiles, discriminates between real and decoy warheads, and sets the Spartan and Sprint weapons on intercept courses with the enemy warheads miles away from the Minuteman-missile field that they are protecting.

Safeguard is designed to explode nuclear warheads close enough to the coming enemy missiles to destroy disable them in space before they strike their intended targets in the U

The Grand Forks complex. Defe officials say that, as of the end of A gust, the radar buildings at Grand For were more than 90 per cent complet the Spartan-missile field was 98 per ce ready, and the five Sprint-missile field were from 40 to 85 per cent complete

Barracks, family housing and othe supporting facilities for the Army serv-



—Defense Dept. Photo

Nerve center for missile defense. At Grand Fork N. D., work progresses on radar for Safeguard AB

icemen and civilians who will operat the Safeguard site were also nearin completion. When in operation, t Grand Forks site will be manned b 1,500 servicemen and civilians. Inclu ing dependents, Safeguard personnel a expected to total about 5,700.

The computers and radar equipmen that are the heart of the system wi take longer to install. Current estimat is that the Grand Forks complex can be ready for action as early as October, 1974, a little more than five years afte the go-ahead signal was given.

Test scores. Defense scientists re port that a total of 32 tests have bee conducted at Safeguard's test facility in the Pacific through Aug. 25, 1972.

Of the first 16 tests at the Meck Is land facilities in the Kwajalein Atoll i 1970 and 1971, it is reported that 1

were successful, 2 were considered partial successes and 2 were failures. In t' urrent, second series of tests, 15 h been successful, 1 a failure.

This summary of progress was given by Lt. Gen. Walter P. Leber, systems manager of Safeguard:

"Progress on the research and development portion of the Safeguard program over the past year has been outstanding, and there are no technical problems which would affect a decision to proceed with the Safeguard deployment in 1973."

What's the cost? Congress approved a total of 3.8 billion dollars for Safeguard in the fiscal years 1968 through 1971. An additional 1.2 billion was approved for the fiscal year that ended June 30, 1972.

The Defense Department had requested 1.6 billion dollars for Safeguard in the current fiscal year, but amended the request to 890 million on September 12. The cut reflects changes stemming from the ABM treaty.

Of the total asked for in the current year, 644 million dollars would be spent on continuing work at Grand Forks, and 246 million for equipment, missiles and other items should a Washington ABM complex be approved.

Safeguard officials estimate that, for th Grand Forks complex alone, a total billion dollars will be spent. A two-site Safeguard, as provided in the treaty, would cost about 8.5 billion.

Work had been going on—and will now be stopped—at Malmstrom, Whiteman and Warren Air Force bases. Malmstrom was about 10 per cent complete. Only preliminary site work had begun at the other two bases.

Cutting back from 12 sites to just one, officials estimate, might save as much as 11.1 billion dollars, even when contract-cancellation costs are paid.

Worth the price? Even as a limited system, Safeguard still has critics. In Congress, there has been mounting oppositon to rising costs. Sen. Harry F. Byrd (Ind.), of Virginia, calculated that a two-site Safeguard would now cost more than four Safeguard sites were once estimated to run.

And some scientists, with years of weapons experience, are fearful that the task assigned Safeguard is too difficult for today's technology to perform except in controlled, laboratory conditions. Says one weapons expert:

"Each of the 30 Spartans and 68 Sprints now planned for Grand Forks could destroy an incoming warhead, but the 99th enemy warhead would still the air base to smithereens. And, remember, the Soviet Union would still have over 2,000 missiles to use on the rest of the U. S."

If Russia decided on a surprise "first strike" by nuclear weapons against the U. S., this would be a probable sequence of events:

- Soviet missiles would be launched against these military targets: the National Command Center in Washington, D. C., and nine widely separated fields housing 1,054 Minuteman and Titan nuclear missiles.
- The U. S. warning network would spot the attack, give a 30-minute warning before the Soviet missiles were due to hit.
- The President and top advisers would go to a protected command center. Strategic bombers would take off from exposed airfields. Missile submarines would be alerted. The President would reach a decision on whether to launch U. S. missiles immediately against the Soviet Union, or to ride out the Russian attack.
- Shortly after first warning, Safeguard system at Grand Forks Air Force missile field would swing into operation. Perimeter acquisition radar (PAR) would pick up and track missiles headed for that area while they were still more than 1,000 miles away.
- As Soviet missiles neared, PAR would "transfer" tracking to missile site radar (MSR) at Grand Forks. MSR would distinguish between armed and decoy warheads, then guide long-range Spartan antiballistic missiles to intercept enemy weapons several hundred miles away in space.
- Next, MSR would launch smaller, faster Sprint missiles to intercept, up to 25 miles away, any missiles that had penetrated the Spartan barrage.
- Meanwhile, other Russian missiles probably would be on their way to destroy Washington, D. C., and up to 854 Minuteman and Titan missiles at the eight missile fields unprotected by Safeguard. But Minutemen at Grand Forks should survive the first attack.

THUS: Even if U. S. nuclear submarines and bomber fleets were unable to deliver their weapons, the President would have at his command 200 Grand Forks missiles to fire in retaliation to the Red attack. Their predicted impact on the Soviet Union: death for 30 per cent of the population, destruction for 76 per cent of the industry.