THE U.S. NUCLEAR WAR PLAN: A TIME FOR CHANGE

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ABOUT NRDC

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EXECUTIVE SUMMARY

Through the use of personal computers, customized computer software, and unclassified databases, the Natural Resource Defense Council (NRDC) is now able to model nuclear conflict and approximate the effects of the use of nuclear weapons. For the first time, this allows non-governmental organizations and scholars to perform analyses that approximate certain aspects of the U.S. nuclear war plan known as the Single Integrated Operational Plan (SIOP).

Initiated during the Eisenhower administration, the SIOP is the war plan that directs the employment of U.S. nuclear forces in any conflict or scenario, and is the basis for presidential decision-making regarding their use. The plan results from highly classified guidance from the President, the Secretary of Defense, and the Joint Chiefs of Staff. The Joint Chiefs of Staff then set requirements for how much damage our nuclear warheads must achieve. Most of the requirements call on U.S. Strategic Command to target Russia, but China and other nations are also viewed as potential adversaries.

The SIOP's logic and assumptions about nuclear war planning influence U.S. national security policy, arms control strategy, and international politics. Though the Cold War has ended, and the SIOP has been through a number of reforms as forces have been reduced, it continues to dictate all matters concerning the U.S. preparations for nuclear war. It establishes mock nuclear war scenarios and requirements that shape U.S. negotiating positions in the Strategic Arms Reduction Treaty (START) arms control process. The SIOP also determines what number of nuclear warheads must be kept at various alert levels.

As the SIOP is one of the most secret documents in the U.S. government, it is difficult to discover what the specific assumptions are upon which it rests. Congress has been powerless to influence the SIOP, and even presidents have only a superficial understanding of the process of nuclear war planning. The secrecy is ostensibly justified to protect certain characteristics about U.S. nuclear forces and warheads, various nuclear weapons effects information, and the specific targets chosen in Russia. But all of these data are known well enough today to provide a quite sophisticated approximation of the actual SIOP assumptions, and the effects of its various nuclear war scenarios. One of the most significant changes since the end of the Cold War has been the greater openness in Russia whereby a high quality database of nuclear, military, and industrial targets can be created using open sources.

Given the central role of the SIOP in national security, nuclear weapons, and arms control policy, NRDC decided to create a tool that will help the non-governmental community assess nuclear war planning and its impacts. We have compiled our own databases of information on weapons, population, effects, and targets to recreate the most important calculations of nuclear war planning. We integrated an enormous quantity of data from open sources, including commercial data on the Russian infrastructure, official arms control data about the structure of Russian nuclear forces, declassified U.S. documents, census and meteorological data, U.S. and Russian maps and charts, U.S. government and commercial satellite imagery, and U.S. nuclear weapons effects data and software.

Using these resources, we developed a suite of nuclear war analysis models based upon the ESRI ArcView software program. From this model and a database

of weapons and targets, we constructed and analyzed in detail two quite different scenarios of a possible nuclear attack on Russia:

- A major U.S. thermonuclear "counterforce" attack on Russian nuclear forces. For this attack, we employed approximately 1,300 strategic warheads using current U.S. weapons. We calculated the damage to these targets and the resulting civilian deaths and injuries.
- A U.S. thermonuclear "countervalue" attack on Russian cities. For this attack, we used a "minimum" force (150 silo-based intercontinental ballistic missile warheads or 192 submarine-launched ballistic missile warheads). We assessed the ensuing civilian deaths and injuries.

FIGHTING REAL NUCLEAR WARS: THE RESULTS

We used actual data about U.S. forces and Russian targets to approximate a major counterforce SIOP scenario. Our analysis showed that the United States could achieve high damage levels against Russian nuclear forces with an arsenal of about 1,300 warheads—less than any of the proposals for a START III treaty. According to our findings, such an attack would destroy most of Russia's nuclear capabilities and cause 11 to 17 million civilian casualties, 8 to 12 million of which would be fatalities.

Our analysis concluded that in excess of 50 million casualties could be inflicted upon Russia in a "limited" countervalue attack. That attack used less than three percent of the current U. S. nuclear forces, which includes over 7,000 strategic nuclear warheads.

One of the historic tenets of nuclear orthodoxy—influential in inspiring the original SIOP—was that countervalue attacks against cities and urban areas were "immoral" whereas counterforce attacks against Soviet (and later, Russian) nuclear forces were a better moral choice. The implied assumption and intent was that attacks could be directed against military targets while cities and civilian concentrations were spared. In reality, things are not so simple, nor can there be such pure isolation between civilian and military. Most difficult of all is to find moral benchmarks when it comes to the targeting of nuclear weapons.

Our analysis challenges that basic assumption. Even the most precise counterforce attacks on Russian nuclear forces unavoidably causes widespread civilian deaths due to the fallout generated by numerous ground bursts. While the intention to avoid civilian casualities is important and is probably included in the guidance, nuclear weapons by their nature live up to their billing as "Weapons of Mass Destruction." We saw this clearly in our simulation of a counterforce attack. We found the effects were complex and unpredictable and therefore uncontrollable from a war planner's perspective. These included such variables as the proximity of urban centers to military targets, whether the population was sheltered or not, and the speed and direction of the wind.

The point here is not to argue for attacking Russian cities or for attacking Russian forces as U.S. nuclear policy. But given the vast number of deaths that occur with the use of a few weapons, we have to ask why the U.S. nuclear forces need to be so

large? If the United States can destroy Russia's standing forces and cause 11 to 17 million casualties in a counterforce attack, should not that be enough to "deter" any conceivable attack by Russia? To go a step further, if the United States went to a minimum force, it would still be able to cause upwards of 50 million casualties. That fact too should be enough to convince Russia or anyone not to use nuclear weapons against the United States.

In light of the findings from our computer simulation of the two nuclear scenarios, we are more convinced than ever that the basic assumptions about U.S. nuclear deterrence policy, and the possession of huge nuclear arsenals needs to be re-examined. The logic of the nuclear war plan expressed in the current SIOP ignores the grotesque results that would occur if the weapons were used. Those results need to be exposed.

WHAT WE RECOMMEND

1. Unilaterally reduce U.S. nuclear forces and challenge Russia to do the same. The sole rational purpose for possessing nuclear weapons by the United States is to deter the use of nuclear weapons by another country. Recommendations for specialized arsenals to fulfill a variety of illusory roles for nuclear weapons are expressions of irrational exuberance. At this stage in the disarmament process, a U.S. stockpile numbering in the hundreds is more than adequate to achieve the single purpose of deterrence. Even that number, as we have seen, is capable of killing or injuring more than a third of the entire Russian population, and destroying most major urban centers.

The current SIOP is an artifact of the Cold War that has held arms reduction efforts hostage. It is time to replace it with something else.

2. Clarify the U.S. relationship with Russia and reconcile declaratory and employment policy. In his May speech at the National Defense University, President Bush said, "Today's Russia is not our enemy." That said, the United States has not yet decided whether Russia is our enemy or our friend, or something in between. The act of targeting defines an individual, a group, or a nation as an enemy. We continue to target Russia with nuclear weapons and devise options and plans for their use. The process itself reduces Russia from flesh and blood to models and scenarios, allowing the contradictory stance to continue. If our words and our actions are to correspond, it is obvious that major changes must take place in the way the United States postures its nuclear forces and plans for their use.

3. Abandon much of the secrecy that surrounds the SIOP and reform the process. Any discussion of U.S. nuclear policy and strategy is undermined by the fact that most of the details surrounding the SIOP are highly guarded secrets. Because of compartmentalization, only a very few have an understanding of the SIOP. The presidential and Pentagon guidance too is so closely held, that no one can question the assumptions or the logic. The nuclear war planning function now resident within U.S. Strategic Command has become a self-perpetuating constituency that needs fundamental reform. Much of the secrecy that surrounds the SIOP can be abandoned without any loss to national security. Therefore, a joint civilian-military staff, with Congressional involvement and oversight, should plan the use of nuclear weapons.

4. Abolish the SIOP as it is currently understood and implemented. Having a permanent war plan in place that demands widespread target coverage with thousands of weapons on high alert is a recipe for unceasing arms requirements by the Pentagon and a continuing competition with Russia and others. It is for this reason that we conclude that the over-ambitious war plan is a key obstacle to further deep arms reductions. The current SIOP is an artifact of the Cold War that has held arms reduction efforts hostage. It is time to replace it with something else.

5. Create a contingency war planning capability. Under new presidential guidance, the United States should not target any country specifically but create a contingency war planning capability to assemble attack plans in the event of hostilities with another nuclear state. This new paradigm would alleviate the requirement for possessing large numbers of weapons and eliminate the need for keeping those that remain on high levels of alert. This shift would also help break the mind-set of the Cold War. We are in agreement with President Bush when he says that we must get beyond the Cold War. We believe, however, that his approach is not the "clear and clean break with the past" that he says he wants. Instead, by assuming a wider range of uses for nuclear weapons, by making space a theater for military operations, and by considering new or improved nuclear warheads for a future arsenal, President Bush is offering more of the same.

6. Reject the integration of national missile defense with offensive nuclear deterrent forces. Current, worst-case SIOP planning demands that both the United States and Russia prepare for the contingency of striking the other first, though it is not stated U.S. or Russian declaratory policy. Introducing national missile defense, which invariably complements offensive forces, will exacerbate the problem. The technological challenges of national missile defense are formidable, the price tag enormous, and if deployed, will provoke a variety of military responses and countermeasures, leaving the U.S. less secure rather than more secure. China, for instance, has long had the ability to deploy multiple warheads on its ballistic missiles and has chosen not to do so. Currently only a small number, less than two-dozen Chinese single-warhead missiles, can reach the United States. A guaranteed way to increase that number would be for the United States to abrogate the Anti-Ballistic Missile Treaty and to deploy a national missile defense system. Furthermore, national missile defenses would likely undermine opportunities for deeper reductions.