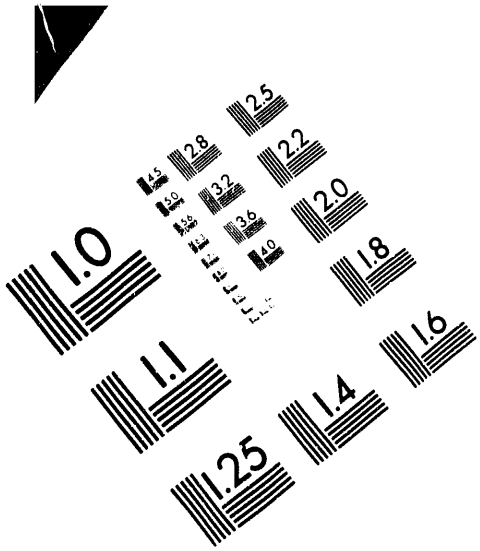

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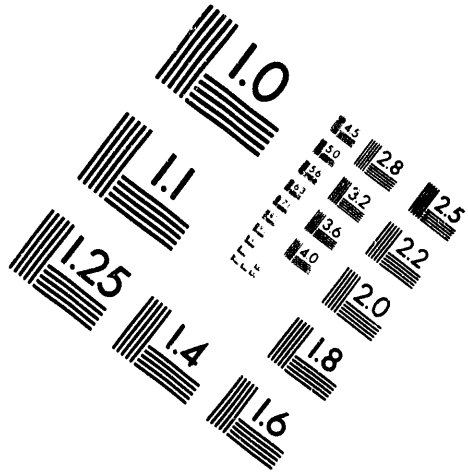

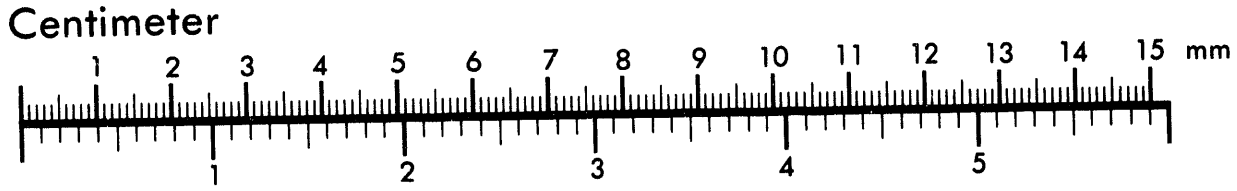

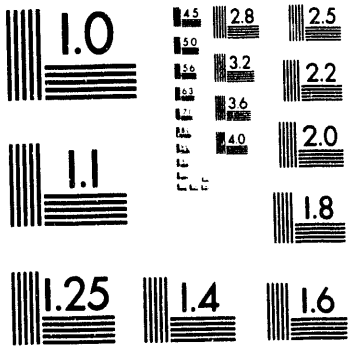

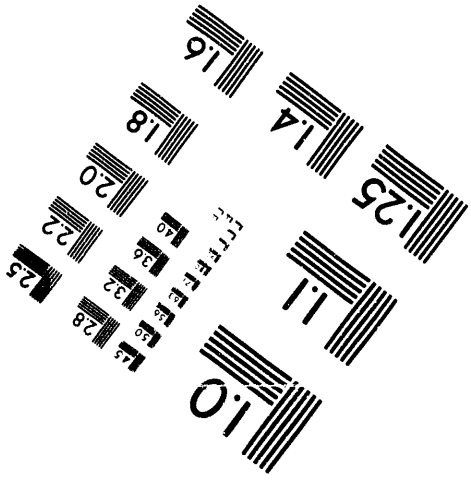

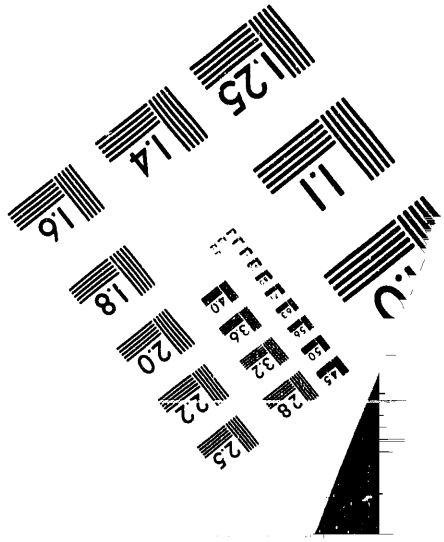

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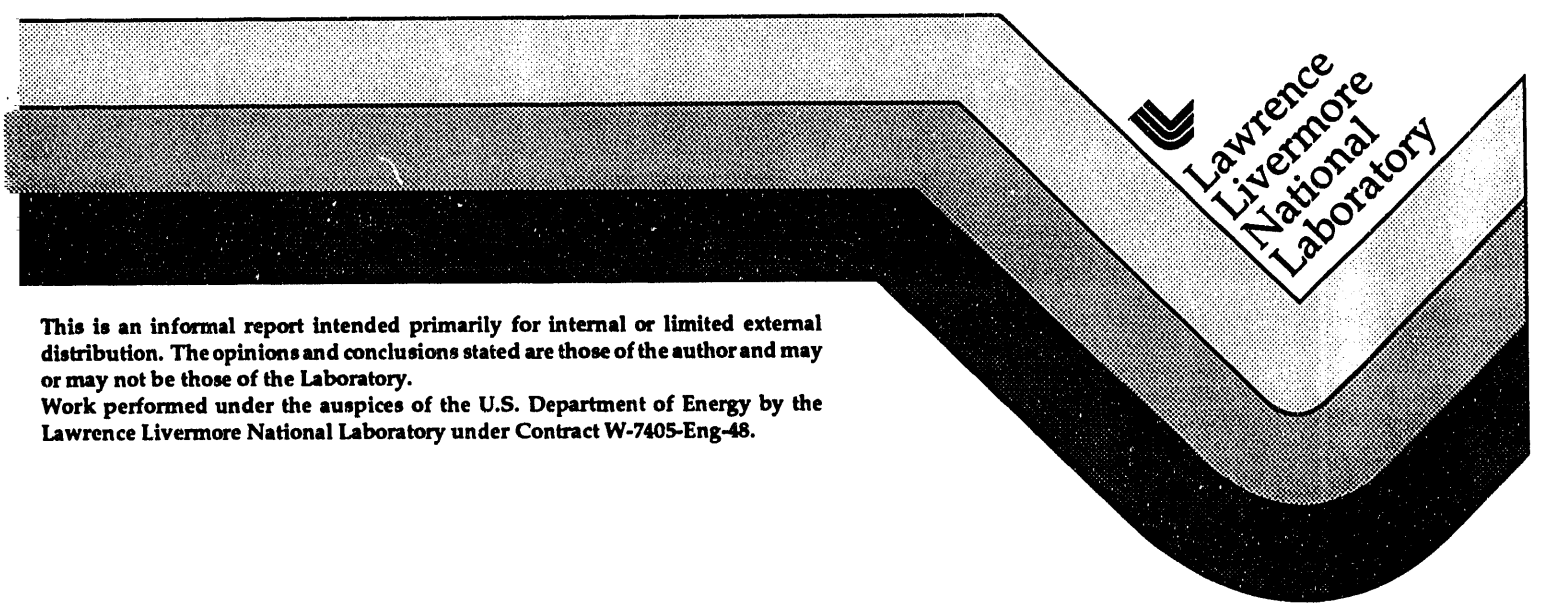
Nuclear Weapons and Regional Conflict

A.L. Latter and E.A. Martinelli

May 1993



Nuclear Weapons and Regional Conflict

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An important national defense objective for the U.S. in the post-cold-war era--according to Secretary of Defense, Cheney—is to deter regional conflicts. To satisfy this objective there is more or less general agreement that nuclear weapons are not needed, especially against regional powers like Iraq that do not (as yet) have a nuclear capability. Modern conventional weapons (PGMs), it is believed, are adequate when used in the traditional way of fighting: massive ground forces with heavy ground equipment, supported by air and naval forces.

Of course, there are arguments against this view. For example, nuclear advocates call attention to deeply buried targets that are unattackable with conventional munitions. But this argument, and others, for U. S. use (or threat of use) of nuclear weapons are presently discounted in favor of the political/moral advantages of a no-first-use policy.

We do not wish to take sides in this debate. We believe, however, that the debate will continue as political, military, technical and economic factors undergo inevitable changes. In this brief paper, we want to present another pro-nuclear argument which, to the best of our knowledge, has received little or no attention. This argument, we believe, could become important in weighing the pros and cons of the debate if domestic pressures cause the defense budget to undergo such severe cuts that we must either abandon our political commitments or adopt a non-traditional war-fighting strategy that is effective under a greatly reduced defense budget.

The strategy we have in mind is to rely on nuclear weapons delivered by long-range air and/or long-range missiles with little or no reliance on ground forces. Targeting would be against the military-industrial complex and the targets would be fixed or localizable. That such a strategy[1] could be militarily effective, is more or less obvious. That such a strategy can be implemented under a greatly reduced defense budget, will be made plausible in what follows.

We make use of Jasper Welch's recent draft report entitled "Conventional Long-Range Bombers: How many of what types do we need?" In his report, Welch estimates the number of aimpoints that must be struck with non-nuclear PGMs weighing ~2000 pounds each. Destruction of these aimpoints is sufficient, according to Welch, to prevent an Iraq-like power from seizing neighboring territory. Welch's number, for this purpose, is ~30,000 delivered in a 30-day (or shorter) period.

We have reviewed Welch's target list and estimated the number of nuclear aimpoints required for the same level of destruction. Our estimate of this number is ~2,500, less than a tenth of the required number of non-nuclear aimpoints. For the sake of discussion we assume that the nuclear warheads have an average weight of ~200 pounds, a tenth of the weight of the ~2,000 pound PGM, from which it follows that the total payload required to destroy the Welch target list with nuclear weapons, is ~500,000 pounds, less than a percent of the payload required with non-nuclear weapons.

To deliver the weapons, either long-range aircraft or ICBMs could be used. For simplicity, ignoring possible treaty limitations, suppose we use ICBMs, MXs in particular. Assuming the MX can deliver ~5,000 pounds to the required range, only ~100 MXs would be needed. Since R & D on the MX has already been paid for, and since the

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[1] Not unlike the strategy adopted during the cold war.

MX does not have to be on continuous alert, and nuclear survivability is much less important, the ten-year system cost per MX should be substantially less than the $40M estimated by the Air Force. Even at $40M per missile the ten-year system cost for 100 MXs is only $4B, less than half a billion per year (compared to ~$250B for the present annual defense budget).

The cost could be even lower. Welch's non-nuclear aimpoints included many repeat attacks to take account of repairs. With nuclear weapons the damage rate is so high that repairs may be impossible. Our estimate of 2,500 nuclear aimpoints did not take this effect into account.

We have said nothing so far about the yield of the nuclear weapons. The ~200 pound weight allows almost any yield of practical interest. But to minimize collateral damage, the yield would have to be tailored to the target list. A careful study is needed, but one might expect that the system cost would increase somewhat.

Needless to say, objections will be raised to the proposed nuclear strategy on the grounds that it will increase the likelihood of nuclear proliferation. Maybe so. Maybe not. Whether the nuclear strategy will be a stronger deterrent to regional conflicts also remains to be seen.

In conclusion we remind the reader that the pro-nuclear argument developed in this report is of no consequence if the defense budget is not severely cut. However, if the budget is severely cut, we don't see any real alternative to the strategic nuclear deterrent we have proposed.

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