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High points of an interim report.
DSB/DPB Task force on CBW

Microbiological stand next to nuclear weapons in the hazards of proliferation. Toxin weapons may be more potent than chemical, but they are more costly to produce and more difficult to disseminate. From a military policy perspective, toxin weapons fall into the same basket as do chemicals; in addition, prophylactic immunization is available for some toxins. From an arms control and verification perspective, toxin production and weaponization is similar to BW. Nevertheless, the remaining discussion will concentrate on live microbiological agents: infectious bacteria, rickettsia and viruses: BW.

For prepared and trained troops, physical barrier protection against BW is as effective (and problematical) as against CW. For this reason, and a/c the long latent period between attack and disability (usually measured in hours and days), BW is correctly believed to be less of a threat than nuclear in tactical engagements. For extended areas, logistics bases and, especially, urban populations these defenses are much less readily achievable. As a strategic weapon, BW rivals nuclear in potential casualties per kilogram of payload. 50 kg. of anthrax spores spread at night, or under dense overcast, over a densely populated city might conservatively generate 100,000 casualties. Long before the casualties were consummated, the psychic terror (since no one would know for days or weeks whether he had been infected) would be incalculable. Such weapons also obviously lend themselves to clandestine and unconventional delivery systems -- a crop-dusting small plane, a spray truck or a fire-fighting boat are already enabled for airborne dispersal. Other agents would be targetted on municipal water supplies or the food chain.

Intelligence reports point to a number of countries, from Russia down to many smaller countries (the latter being the more plausible adversaries as of 1992) who are fully possessed of the necessary technology. While the level of deployment may be limited (or at least our knowledge thereof), the interval to full scale weaponization would be measured in months, at most one or two years. In fact, there are no significant technological barriers to the production and exercise of these weapons. Programs scaled to budgets of \$10⁷ could produced strategically significant levels of BW; much smaller investments would put very nasty and psychically potent threats in the hands of terrorists.

Nevertheless BW has received a miniscule fraction of the policy, research and procurement attention allocated to nuclear. This disparity arises in part from the U.S. abjuration of offensive BW in accordance with the terms of the 1972 BW disarmament convention. The nuclear weapons culture is therefore vaster than the advocacy and expertise available for BW, operationally confined to a purely defensive mode. It must also be noted that BW has not been exercised openly, on a large scale, and with decisive military effect in modern warfare -- in contrast to the nuclear bombs that ended World War II. It should be a major policy objective to reinforce that tradition of nonuse.

Since the Gulf War, military attention to BW defense has risen to what might be termed a minimalist reaction to the stated threat -- above all the threat is officially recognized in

defense doctrine. {{Sheila -- please break out the budgets, for MRDC - BDRP as well as procurement dollars relevant to vaccine and MOPP etc procurement}}

Our task force has given particular attention to the Biological Defense Research Program, for which the Army is lead agent. We enjoyed a comprehensive briefing from General Tom Travis and his staff at the Medical Research and Development Command at Ft. Detrick. Our conclusions are based on those disclosures, intelligence briefings, and substantial prior experience of our panel members.

1. A number of key policy directions have yet to be affirmed: basically what are the threat scenarios to be incorporated into formal guidance? Who is to be defended: US troops OCONUS(?), how many?; allied forces; overseas host country populations?
2. Which BW agents? Obviously those assessed to have been deployed deserve first priority. But an adversary could switch to another BW agent in time measured in months, shorter than the likely interval for intelligence acquisition and assessment, and offscale compared to the time needed for the defensive development cycle. Current legislation, mainly in response to Senator Glenn's insistence, limits the BDRP to "intelligence-authenticated threats", namely to those agents already proven to have been weaponized. (For the most part this assessment is based on the US' own offense program prior to 1972). Accepting that such threats deserved the first priority, we urge that the DoD make every effort to be relieved of this absolute stricture in future authorizations. {{Sheila: please get text of act}}.
3. Surge capability. There are grave hindrances to vaccine procurement today, both in the civilian and the military sector. There are few US manufacturers, and established companies are abandoning the market, largely a/c torts liability problems. Many current vaccines are technologically obsolete. We believe that at most modest stockpiles should be procured through existing channels, and that investment be guided by flexibility in reaction to future contingencies, flexibility both qualitative and quantitative. GOCO facilities, with full indemnification for vaccine products manufactured according to stated specifications, are probably the only feasible approach. Surplus capacity in such facilities could be leased, by competitive bid, for production for other markets: this would lessen the cost burden, and might help break the impasse for production for civilian needs. These options are under doctrinal consideration --- we could not determine how they are being judged. {Sheila -- recall the Army docs. that are so elusive}
4. The technology base is in particular difficulty, suffering both from (inevitable) general downsizing, widespread complacency and neglect of infectious disease [other than AIDS], and the particular strictures of the previous section.
5. It is important that vaccines be given the meticulous scrutiny for safety and efficacy they now enjoy under FDA regulation. For products being developed in the private sector, FDA approval is based on an adversarial presumption, and that a vaccine (or drug) proponent will recover all the costs of testing from the profits on sale. A new paradigm may be needed here, in which FDA (or other government agency) scientists can play a participatory role in delineating the testing appropriate for military vaccines, and their role in emergencies. This may reach to indoctrination about informed consent at the time of enlistment. Under current

regulation, there are no limits to the hazards a soldier may be exposed to under military necessity; but he cannot be ordered to take a new vaccine intended to save his life.

6. Very limited progress has been made in the development of sensors for biological attack. Early efforts have led to systems with an unacceptable false-alarm rate: after 3 false warnings in the field, they would be totally ignored. The urgency of this requirement is obvious: we suggest a team of bio-chemical experts review the program and ascertain whether the laws of chemistry and physics, the level of funding, or the quality of management are the limiting factors. At this time, there is a reasonable chance that the field anthrax detectors could affirm that a suspicious cloud was indeed anthrax, perhaps 15 minutes after sampling. If it were any of dozens of other agents, 1 or 2 days of laboratory work in rear echelon would be needed -- perhaps just before or after casualties became evident. The morale effects of such uncertainties are obvious.

7. We reiterate the obvious about the importance of intelligence for early warning. There are still serious organizational and funding barriers for the establishment of cleared laboratory facilities for the examination of suspect BW samples. At the same time, extraordinary technical advances in biotechnology, PCR, etc. have afforded very powerful analytical tools. Collaboration with British analysts has been particularly useful in unmasking the continued Russian BW programs, admitted by Yeltsin to have been in violation of the BWC. (This is simply quoting Press reports) We can add little to prevailing wisdom about this prodromal symptom of Yeltsin's control over the military. Such flagrant violation is important regardless of the (un)likelihood of Russia posing a direct military threat to the U.S. [See 8.]

For reasons outside the intelligence community, the organization of inquiry into Iraqi BW activity just after the Gulf War was nothing other than lackadaisical. The Iraqi's had ample time to cleanup; and the credibility of the indictment about BW development has been clouded. They could reconstitute within months -- if they have not already done so in clandestine facilities. [This is not an IC assessment; but I don't believe they would refute it.]

8. It will be a real stumble into the darkness if the tradition of a BW-free world is violated. This is Global Non-Proliferation, in contrast to the division of the world into nuclear-weapons states and the have-nots. There is some hope then of sustaining a moral basis to recruit global support for severe sanctions against violators. That will evaporate if we make exceptions for other policy objectives, as we have done for nuclear, and in respect of Iraq during its war with Iran, chemical proliferators. The US should take the leadership in reaffirming an international consensus that any user of BW will pay dearly for the violation.

9. BW as stated is, above all, a strategic weapon. But no one has any mandate for planning how to fend a BW attack on our own cities, or those of allies, or how to limit the subsequent damage. For example, existing stockpiles of antibiotics would be quickly depleted. There was a flurry of concern during the Gulf War; now there are at most promises that different agencies will somehow coordinate their existing assets in the event the "impossible" happens. The DNA is sponsoring some studies on different modes of warhead neutralization should tactical missiles be carrying BW or CW. We lack a good deal of the basic knowledge needed to predict the decay of an intercepted BW warhead at different altitudes, atmospheric conditions, sunlight, etc. We urge the DoD to take the initiative -- with

I suspect warm approbation from Dr. D A Henderson of the Office of Science and Technology Policy -- together especially with the Center for Disease Control and Prevention, in formulating a comprehensive plan for civil defense against BW attack. If such an attack should eventuate, the military establishment will be held blameworthy for that failure in national defense, regardless of the purported mandate -- and above all we will blame ourselves.

#. BW policy is a rapidly moving target, and we recognize that many of our recommendations may be in the pipeline beyond our awareness. If so, so much the better; but we also caution about taking even the obvious for granted.