has already warned that if Iraq cannot be persuaded to turn back, a "third party" might intervene to stop it.

Those are the dark implications of the U.N. report. But there is an encouraging one, too. Through its inquiry, the U.N. has shown it is ready to wade into bitter disputes such as this and collect evidence for the world to see. The investigation has produced an impartial and thus very strong indictment. Unfortunately, exposing the evidence in this case may not be enough. The next step—bringing chemical weapons back under control—may require a lot more work.

The Secretary-General of the U.N., Javier Perez de Cuellar, commissioned this inquiry on an emergency basis early in March. Iran had pleaded for help several times, beginning on 28 October 1983. The U.N. considered the request but took no immediate action. Then, apparently, the Iraqis began to renew the chemical attacks. On 5 March, the United States accused the Iraqis of deploying "lethal chemical weapons" and said it "strongly condemns" their use.

On 13 March the four U.N. scientists traveled to Iran, visited the war zone, collected samples, and examined victims of chemical attacks in Iranian hospitals. They returned to Geneva on 19 March and reported the unanimous findings: all the details fit a pattern of mustard and nerve gas poisoning.

One charge for which the U.N. team saw no evidence was the claim in the *Wall Street Journal* on 12 March that mycotoxins had been used by the Iraqis. The allegation was based on work done by a toxicologist named Aubin Hendrickx of the Toxicological Institute in Ghent, Belgium. According to the *Journal*, Hendrickx analyzed "blood, urine, and stool samples" from Iranian soldiers. The *Journal* announced in an editorial:

> This time the tests showed residues of both mycotoxins and mustard gas. Presumably the two agents were mixed to enhance the effect. . . . We can confidently assume that the identification of mycotoxins in the Iraq-Iran war represents yet another Soviet violation of the Biological Weapons Convention of 1972, which banned the development, possession, or transfer to third parties of biological and toxin weapons. It seems the Soviets have not only developed such weapons but are handing them out around the world like candy.

The U.N. report states simply that "no evidence" of mycotoxins was found. In official statements, the United States has said the same. The Swedish scientist who analyzed the liquid samples from Iraq—Johan Santesson—and a U.S. policy official have said they cannot imagine why anyone would mix mycotoxins and mustard gas, for the two would react. The toxin probably would be rendered impotent. Hendrickx's report thus seems to carry little weight at the State Department.

The task of stabilizing the crisis and bringing the gas weapons under control has just begun. The U.N. Security Council took the first step on 30 March, formally condemning the use of chemical weapons and urging Iraq and Iran to negotiate a peace. On a more pragmatic level, the United States has stopped one U.S. company from shipping some po-

Pentagon Names Star Wars Czar

The Pentagon has appointed James Abrahamson, an Air Force Lieutenant General now in charge of the space shuttle program, to head its new effort to protect the public from the threat of attack by nuclear missiles. The effort, which has been officially titled the "strategic defense initiative," originated a year ago in a speech by President Reagan, popularly dubbed the "star wars" speech.

Abrahamson, 51, is an experienced and highly regarded manager of military research and development programs. A graduate of the Massachusetts Institute of Technology, he earned a master's degree in aeronautical engineering from the University of Oklahoma in 1961. He worked, in succession, as a project officer with satellites designed to detect nuclear explosions, as an Air Force test pilot, as a potential astronaut in the Manned Orbiting Laboratory program, as an inspector general of the Air Force Systems Command, and as a director of the F-16 jet fighter program. He became associated with the space shuttle program after chairing a panel in 1979 that sharply criticized its management.

In Abrahamson's new post, his first involving pure research, his managerial power will be derived primarily from the ability to shift funds from one area to another, to prepare long-term budgets, and to express his views directly to Defense Secretary Caspar Weinberger. Agency officials have apparently not yet decided whether he will also have the power to veto proposals made by the various fiefdoms where ballistic missile defense (BMD) research is presently conducted. Although only one person, Major Peter Worden, an astrophysicist, is presently working full-time on the star wars plan, Abrahamson's office is expected eventually to employ several dozen specialists.

Much of the program's budget for 1985 has already been decided. The largest amount—$721 million—will be spent on space surveillance, target acquisition, tracking, and kill assessment. Additional funds will be expended on directed energy weapons ($489 million) and kinetic energy weapons ($356 million), as well as command, control, and communications ($99 million). Skeptics who wonder about the survivability of space-based BMD components, as well as potentially devastating Soviet countermeasures, will be relieved to learn that the Pentagon intends to increase its research on these topics by a whopping 355 percent, to reach a total of $112 million.

Five percent of the budget, or roughly $85 million, will be allocated to long-term, high-risk scientific research. Among the topics to be investigated are the feasibility of constructing space-based antimatter beam weapons to be used against Soviet missiles shortly after their launch, and the practicality of using materials mined from asteroids or the moon for shielding space-based weapons against a preemptive attack.

Worden says that the Pentagon is also interested in providing funds to the National Science Foundation for university research. He describes this as "one way to get around the scientific community's reluctance to work with the Defense Department on this topic." Although the details are still under discussion, the Pentagon is considering a transfer of funds amounting to "a few hundreds of thousands of dollars" for NSF research on solar physics and large, high-resolution space telescopes in fiscal year 1985. According to Morris Aizenman, who directs NSF's astronomy division, all of the projects will be funneled through NSF's normal peer-review procedures, none will be supported solely by the Pentagon, and no restrictions will be placed on the researchers' publication rights.—**R. JEFFREY SMITH**