

# F.A.S. PUBLIC INTEREST REPORT

JOURNAL OF THE FEDERATION OF AMERICAN SCIENTISTS (F.A.S.)

Volume 54, Number 6

November/December 2001

## Recommendations for Preventing Nuclear Terrorism

By Frank von Hippel

Nuclear weapons are inherently terrorist weapons. During the Cold War, US and Soviet nuclear weapons were developed, produced and deployed to deter potential aggressive actions by the other despite the expectation of tens to hundreds of millions of “collateral” civilian deaths if nuclear-war plans were executed. The catastrophe did not happen — but still could.<sup>1</sup>

The September 11 attack established the credibility of another danger: Terrorists exist who would be willing to make and use nuclear weapons. Indeed, it is known that Osama Bin Laden has tasked his operatives to acquire nuclear-weapons materials.

There has been much argument about whether terrorists could make a successful implosion weapon using plutonium.<sup>2</sup> It is generally agreed, however, that educated terrorists could turn weapon-grade uranium (containing more than 90% U-235) into a gun-type nuclear explosive of the type that the US used on Hiroshima and with which South Africa stocked its nuclear arsenal.<sup>3</sup> Plutonium, even if it is not made into a nuclear explosive can still be used in a radiological weapon, if dispersed into the atmosphere as a fine inhalable oxide aerosol. However, this would be mostly a psychological weapon. The near-term casualties would likely be few and the increased cancer risks of individuals in the exposed population slight,

although there might eventually be on the order of a thousand extra cancer deaths added to 200,000 expected cancer deaths over the lifetimes of an exposed population of a million.<sup>4</sup>

Estimates of the global stocks of separated highly-enriched uranium (HEU, containing more than 20% U-235) and plutonium inside and outside of weapons are shown in Table 1 (see page 4). Although Russia and the US possess the largest stocks, all stockpiles containing sufficient material to make a single nuclear explosive are of concern. Today, for example, there is concern about the security of Pakistan’s stockpile of weapon-grade uranium. It is relatively small but probably sufficient to make tens of nuclear explosives.

Long before the events of September 11, programs were underway to increase the security of fissile materials worldwide, end their production and to dispose of excess stocks. The US has been the principal funder of these efforts, which were mostly launched following the collapse of the Soviet Union as a result of warnings of the possibility of “loose nukes.” A decade later, however, budgets were being cut, completion dates were slipping by many years and some programs were on the verge of cancellation.

Table 2 (see page 5) shows: US expenditures on some key coopera-

*continued on p. 4*

## Nobel Laureates Urge Congress to Keep ABM Treaty

By Michael Levi

On September 11, strategic security transformed from a subject of esoteric debate into a matter of urgent everyday concern for all Americans — and for all of civilization.

For many years, debate has raged over whether the most probable delivery system for a powerful terrorist weapon would be a ballistic missile or clandestine use of a commercial transport vehicle.

September 11 injected reality into that debate.

We take no joy in the fact that thousands of innocent civilians of tens of nationalities were sent to horrible deaths by clandestine delivery as we predicted. But it has happened. It can happen again.

It is also fact that, had the terrorists used a nuclear or contagious biological weapon instead of jet fuel, casualties would have been two or three orders of magnitude greater. Whether this can happen depends in part on the priorities the United States government sets.

As Frank von Hippel points out, safeguarding and elimination of Russian fissile material is underfunded by more than 90%. Yet National Missile Defense

*continued on p. 3*

## In This Issue ...

Recommendations for Preventing Nuclear Terrorism .....	1
Nobel Laureates Urge Congress to Keep ABM Treaty .....	1
Making a Bequest to FAS .....	2
Animal Disease Project Aids Effort to Investigate Anthrax Attack .....	8
Carving Away at Conventional Arms Controls in the Name of Fighting Terrorism .....	9
Strategic Security Heats Up .....	10
Government Secrecy After September 11 .....	11
Emergency Response to Biological/Chemical Weapons Events: An Online Training Program .....	12

## Making a Bequest to FAS

By Drew Wynn

FAS is determined to maintain its long tradition of drawing on the best of the nation's advances in science and technology so that coming generations will enjoy a safe, prosperous, and sustainable future. It is not surprising that many FAS members are thinking about preserving such a future through bequests.

Bequests provide important resources for FAS' long-term financial stability. When members make a will with charitable interests in mind, they may leave a specific amount or percentage of their estate to FAS. Additionally, your bequest to FAS will reduce estate taxes, which in some cases helps to simplify the execution of your estate. Within the past few months, FAS has

received two such bequests.

Please note that with the merger of FAS and the FAS Fund, our name is simply FAS. The new organization retains the tax-exempt, tax-deductible charitable status, and bequests to FAS or the FAS Fund will benefit the new organization.

If you have included the FAS Fund in your will as a beneficiary, our attorney has suggested that adding a codicil about the name change to the will can prevent any misunderstandings about the donor's intent. As with any financial planning, please consult an expert before you make your decisions.

Questions? Call or e-mail FAS' Development Director at 202/454-4692 or [dwynn@fas.org](mailto:dwynn@fas.org). □

## FAS

The Federation of American Scientists (FAS), founded October 31, 1945 as the Federation of Atomic Scientists by Manhattan Project scientists, works to ensure that advances in science are used to build a secure, rewarding, environmentally sustainable future for all people by conducting research and advocacy on science public policy issues. Current weapons nonproliferation issues range from nuclear disarmament to biological and chemical weapons control to monitoring conventional arms sales; related issues include drug policy, space policy, and disease surveillance. FAS also promotes learning technologies and limits on government secrecy. FAS is a tax-exempt, tax-deductible 501(c)3 organization.

### BOARD OF DIRECTORS

*Chairman:* FRANK VON HIPPEL  
*President:* HENRY KELLY

*Members:* RUTH S. ADAMS  
DAVID ALBRIGHT  
BRUCE BLAIR  
HAROLD A. FEIVESON  
RICHARD GARWIN  
MARVIN L. GOLDBERGER  
KENNETH N. LUONGO  
MICHAEL MANN

*Vice-Chairman:* STEVEN FETTER  
*Sec'y-Treasurer:* HAROLD A. FEIVESON

HAZEL O'LEARY  
JANE OWEN  
WILLIAM REVELLE  
SHANKAR SASTRY  
JONATHAN SILVER  
GREGORY SIMON  
LYNN R. SYKES  
GREGORY VAN DER VINK

## FAS Public Interest Report

The *FAS Public Interest Report* (USPS 188-100) is published bi-monthly at 1717 K St. NW Suite 209, Washington, DC 20036. Annual subscription is \$50/year. Copyright©2001 by the Federation of American Scientists. ♦ Archived *FAS Public Interest Reports* are available online at [www.fas.org](http://www.fas.org) or phone (202) 546-3300, fax (202) 675-1010, or email [fas@fas.org](mailto:fas@fas.org).

*Editor:* Drew Wynn, Development Director  
*Assistant Editor:* Karen Kelley, Organization Manager

### BOARD OF SPONSORS

\*Sidney Altman *Biology*  
\*Philip W. Anderson *Physics*  
\*Kenneth J. Arrow *Economics*  
\*Julius Axelrod *Biochemistry*  
\*David Baltimore *Biochemistry*  
Paul Beeson *Medicine*  
\*Baruj Benacerraf *Immunology*  
\*Hans A. Bethe *Physics*  
\*J. Michael Bishop *Biology*  
\*Nicolaas Bloembergen *Physics*  
\*Norman Borlaug *Agriculture*  
\*Paul Boyer *Chemistry*  
Anne Pitts Carter *Economics*  
\*Owen Chamberlain *Physics*  
Morris Cohen *Engineering*  
\*Stanley Cohen *Biochemistry*  
Mildred Cohn *Biochemistry*  
\*Leon N. Cooper *Physics*  
\*E. J. Corey *Chemistry*  
Paul B. Corneily *Medicine*  
\*James Cronin *Physics*  
\*Johann Deisenhofer *Biology*  
Carl Djerassi *Chemistry*  
Ann Druyan *Writer/Producer*  
\*Renato Dulbecco *Microbiology*  
John T. Edsall *Biology*  
Paul R. Ehrlich *Biology*  
George Field *Astrophysics*  
\*Val L. Fitch *Physics*  
Jerome D. Frank *Psychology*  
\*Jerome I. Friedman *Physics*  
John Kenneth Galbraith *Economics*  
\*Walter Gilbert *Biochemistry*  
\*Donald Glaser *Physics-Biology*  
\*Sheldon L. Glashow *Physics*  
Marvin L. Goldberg *Physics*  
\*Joseph L. Goldstein *Medicine*  
\*Roger C. L. Guillemin *Physiology*  
\*Herbert A. Hauptman *Chemistry*  
\*Dudley R. Herschbach *Physics*  
Frank von Hippel *Physics*  
\*Roald Hoffmann *Chemistry*  
John P. Holdren *Public Policy*  
\*David H. Hubel *Medicine*  
\*Jerome Karle *Physical Chemistry*  
Nathan Keyfitz *Demography*  
\*H. Gobind Khorana *Biochemistry*  
\*Arthur Kornberg *Biochemistry*  
\*Edwin G. Krebs *Pharmacology*  
\*Willis E. Lamb *Physics*  
\*Leon Lederman *Physics*  
\*Edward Lewis *Medicine*  
\*William N. Lipscomb *Chemistry*  
Jessica T. Mathews *Public Policy*  
Roy Menninger *Psychiatry*  
Robert Merton *Sociology*  
Matthew Meselson *Biochemistry*  
Neal E. Miller *Psychology*  
\*Franco Modigliani *Economics*  
\*Mario Molina *Chemistry*  
Philip Morrison *Physics*  
Stephen S. Morse *Virology*  
\*Joseph E. Murray *Medicine*  
Franklin A. Neva *Medicine*  
\*Marshall Nirenberg *Biochemistry*  
\*Douglas D. Osheroff *Physics*  
\*Arno A. Penzias *Astronomy*  
\*Martin L. Perl *Physics*  
Gerard Piel *Publisher*  
Paul Portney *Economics*  
Mark Ptashne *Molecular Biology*  
George Rathjens *Political Science*  
\*Burton Richter *Physics*  
David Riesman, Jr. *Sociology*  
\*Richard J. Roberts *Biology*  
Vernon Ruttan *Agriculture*  
Jeffrey Sachs *Economics*  
\*J. Robert Schrieffer *Physics*  
Andrew M. Sessler *Physics*  
\*Phillip A. Sharp *Biology*  
Stanley K. Sheinbaum *Economics*  
George A. Silver *Medicine*  
\*Herbert A. Simon *Psychology*  
\*Richard E. Smalley *Chemistry*  
Neil Smelser *Sociology*  
\*Robert M. Solow *Economics*  
\*Jack Steinberger *Physics*  
\*Henry Taube *Chemistry*  
\*James Tobin *Economics*  
\*Charles H. Townes *Physics*  
Myron E. Wegman *Medicine*  
Robert A. Weinberg *Biology*  
\*Steven Weinberg *Physics*  
\*Torsten N. Wiesel *Medicine*  
Alfred Yankauer *Medicine*  
Herbert F. York *Physics*  
\*Nobel Laureate

## Nobel Laureates' Letter to Congress

To Senate Majority Leader Tom Daschle, Senate Minority Leader Trent Lott, House Speaker Dennis Hastert, and House Minority Leader Richard Gephardt. Simultaneous copies to Chairmen and Ranking Minority Members of Armed Services and Foreign Relations committees and to news media.

In the interest of national security we urge you to deny funding for any program, project, or activity that is inconsistent with the Anti-Ballistic Missile (ABM) Treaty. The tragic events of September 11 eliminated any doubt that America faces security needs far more substantial than a technically improbable defense against a strategically improbable Third World ballistic missile attack.

Regarding the probable threat, the September 11 attacks have dramatized what has been obvious for years: A primitive ICBM, with its dubious accuracy and reliability and bearing a clear return address, is unattractive to a terrorist and a most improbable delivery system for a terrorist

weapon. Devoting massive effort and expense to countering the least probable and least effective threat would be unwise.

Regarding the technology, while "hitting a bullet with a bullet" under laboratory conditions is feasible, it is far more difficult to design a system that can survive and provide effective protection against a surprise attack that employs varying countermeasures, some of which may surprise the defense. The inherent advantages of the offense exceed the inherent advantages of superior American technology, particularly if the offense is a rogue state that needs only to succeed with one among many weapons to accomplish its purpose.

Previous attempts at a national missile defense have collapsed as it

became evident that performance was much lower and cost much higher than advertised. We see no evidence systems currently being put forward will meet or merit a different fate.

Our nation can gain more effective protection against a weapon of mass destruction on a ballistic missile by keeping such weapons from proliferating into the hands of hostile entities. Abrogation of the ABM Treaty, added to recent expressions of hostility toward other arms control agreements, would also undermine nonproliferation. It would also undermine as well cooperation with Russia and China on reducing nuclear dangers. We therefore urge that the ABM Treaty remain in force.

SIDNEY ALTMAN  
PHILIP ANDERSON  
KENNETH ARROW  
JULIUS AXELROD  
DAVID BALTIMORE  
BARUJ BENACERRAF  
HANS BETHE  
J. MICHAEL BISHOP  
NICOLAAS BLOEMBERGEN  
PAUL BOYER  
OWEN CHAMBERLAIN  
E.J. COREY  
JAMES CRONIN

JOHANN DEISENHOFER  
EDMOND FISCHER  
VAL FITCH  
JEROME FRIEDMAN  
WALTER GILBERT  
DONALD GLASER  
SHELDON GLASHOW  
PAUL GREENGARD  
ROGER GUILLEMIN  
DUDLEY HERSCHBACH  
ROALD HOFFMANN  
JEROME KARLE  
WALTER KOHN

ARTHUR KORNBERG  
EDWIN KREBS  
HERBERT KROEMER  
LEON LEDERMAN  
EDWARD LEWIS  
RUDOLPH MARCUS  
FRANCO MODIGLIANI  
MARIO MOLINA  
JOSEPH MURRAY  
MARSHALL NIRENBERG  
DOUGLAS OSHEROFF  
ARNO PENZIAS  
MARTIN PERL

WILLIAM PHILLIPS  
NORMAN RAMSEY  
RICHARD ROBERTS  
ROBERT SOLOW  
JACK STEINBERGER  
JOSEPH TAYLOR  
JAMES TOBIN  
CHARLES TOWNES  
DANIEL TSUI  
STEVEN WEINBERG  
ERIC WIESCHAUS  
ROBERT WILSON

*Nobel continued from p. 1*

(NMD) is funded at three times the total requirement for protecting Russian fissile material from possible terrorist acquisition.

While the September 11 attack caused NMD to be the target of much sarcastic negative comment in

the news media, it also caused an immense boost in President Bush's approval ratings. An Administration riding so high feels no need to re-examine what would otherwise be controversial policies.

Since September 11 the American people and the media have, rightly, viewed elimination of

terrorist organizations as the highest-profile national security issue.

On November 12, FAS and Nobel physicist Steven Weinberg held a national press conference releasing a letter from 50 American Nobel laureates to Congress. □

**Recommendations** *continued from p. 1*

tive fissile-material security programs in Russia and disposition of US excess plutonium during fiscal year 2001, which ended in September 2001; the level of effort proposed in the Bush Administration budget for fiscal year 2002; and the preliminary results from the Congressional Conference Committees responsible for reconciling the House and Senate budget actions.

It will be seen that the Bush Administration proposed lower funding for these programs in its first budget than did the Clinton Administration in its last budget. This was despite the recommendations in January 2001 of a bipartisan group co-chaired by Howard Baker and Lloyd Cutler that the funding of these programs should be increased approximately *tenfold* (see the last column of Table 2). It was also despite lobbying of the White House by such Republican stalwarts as Senators Domenici and Lugar who have been leading advocates of these programs.

Within the Department of Energy budget, the Administration decided instead to increase the funding for US nuclear-weapon R&D. Within the Department of Defense, the new Bush appointees gave overwhelming priority to national missile defense. Indeed, even after the White House announced its budget, DoD officials lobbied successfully to eliminate the funding for the one program on Table 2 for which the DoD was responsible: helping Russia shut down three plutonium-production reactors in Siberia which together continue to produce about a ton of weapon-grade plutonium per year.

After the September 11 attack, the White House came to the Congress with a request for an additional \$40 billion in emergency funding. However, it included no additional funding for nuclear-materials security in Russia. When

a bipartisan Congressional coalition proposed an additional supplement, which would have included such funds, President Bush threatened that he would veto any additional supplement beyond his request.

Below is a brief review of the

**Table 1. Global stocks of fissile material**  
(metric tons)

<b>Military HEU (90% U<sup>235</sup> equiv., '94)<sup>28</sup></b>	
USA	580-710
Russia	735-1365
UK	6-10
France	20-30
China	15-25
Pakistan (end 1999)	0.6-0.8
S. Africa	0.4
Subtotal	1360-2140
<b>Civilian HEU (research-reactor fuel) ~20</b>	
<b>Weapon-grade plutonium ('94)<sup>29</sup></b>	
USA (all grades)	85
Russia	100-165
UK	7.6
France	3.5-6.5
China	2-6
Israel	~0.4
India	~0.3
N. Korea	~0.03
Pakistan (end 1999)	0.001-0.01
Subtotal	200-270
<b>Separated civilian Plutonium ('99)<sup>30</sup></b>	
Britain	72.5
France	81.2
Russia	32
Germany	7.2
Japan	5.2
Other European	4.5
Subtotal	~200

ongoing efforts, organized by their purpose:

- Increasing the security of fissile materials;
- Increasing the transparency of past production, disposition and current stocks;
- Ending additional production; and
- Disposing of the excess.

The important complementary efforts to create civilian jobs for the excess nuclear-weapons workers that Russia can no longer support will

not be discussed here. Obviously, the effectiveness of technical assistance will be reduced and even negated if a significant percentage of the people in Russia's nuclear cities are unemployed and desperate for means to put food on their families' tables.<sup>5</sup>

**Increase security**

The US began to upgrade the security of its own fissile materials in the late 1970s. Recently, however, US Army and Navy commando teams have demonstrated that they were still able to penetrate the security systems at a number of US nuclear facilities and seize and carry off significant quantities of weapon-usable nuclear materials. In one mock raid on a site at the Los Alamos nuclear-weapons laboratory, Army Special Forces showed that they could kill the guards and made off with several bombs worth of weapon-grade uranium in a garden cart.<sup>6</sup>

The situation is much worse in Russia, however. The security system it inherited from the Soviet Union, which concentrated on controlling personnel, began to break down with perestroika, when job mobility and freedom to travel increased greatly. The drastic decline in Russian living standards and the rise of the Russian mafias put pressure on this weakening system. The major barriers that prevented a huge hemorrhage of Russian weapons materials into the black market were the dedication of the great majority of the Russian nuclear workers and the continued controls imposed by the Russian security apparatus on access to the "nuclear cities." Nevertheless, there have been a number of intercepts both inside Russia and in the surrounding countries of small quantities of plutonium and HEU.<sup>7</sup>

Since 1994, the US has been helping Russia to install Western-style materials protection, control,

Table 2. **Budgets and proposed budgets for key US programs to help Russia secure, end production, & dispose of excess nuclear materials**  
(millions of dollars)

	FY 2001 Final	FY 2002		
		Bush Admin. Request	Conference Committee <sup>a</sup>	Baker-Cutler Task Force recommendations <sup>b</sup>
<i>Materials security in Russia (DoE)</i>	170	139	169	550
<i>Accounting for Russian civil plutonium (DoE)</i>	0.5	0	0	NA
<i>Convert HEU fueled research reactors worldwide (DoE)</i>	5.6	5.6	5.6	NA
<i>Replace Siberian plutonium production reactors (DoD)</i>	32	42	42	75 (per year for 4 years)
<i>End Russian commercial reprocess (DoE)</i>	17	0	0	NA
<i>Accelerate the disposal of excess Russian weapons grade uranium</i>	0	0	0	1200
<i>Dispose of Russian weapons grade plutonium (DoE)</i>	40	15	19	1000
<b>TOTAL</b>	<b>265.1</b>	<b>201.6</b>	<b>235.6</b>	<b>2825</b>

and accounting systems at the many sites where it stores nuclear weapons and fissile material. The US spent \$170 million on this effort during FY 2001. However, security upgrades have been completed on facilities containing less than 40% of the estimated 600 metric tons of HEU and separated plutonium that Russia has outside of its nuclear weapons and US program managers currently project that completion of these upgrades will take another nine years.<sup>8</sup>

A higher level of effort is required. However, full expansion of the programs into weapons-production facilities and nuclear-weapon storage sites will require resolution of disagreements over the level of access to the security improvements that the US needs to assure itself that its funds are being properly used. Russia must also commit that the equipment will be properly operated and maintained and that systems and deployments will be subject to regular and stringent performance testing.<sup>9</sup>

### **Increase transparency of stocks**

In 1996, the US Government published its estimates of the amount of plutonium that it had produced and acquired (111.4 tons), the quantities in various uses, including weapons and components (66.1 tons), and an accounting for most of the 11.9 ton difference between production and current stocks (there was a 2.8 ton “inventory difference”).<sup>10</sup> However, publication of a parallel report on US HEU, promised for 1997, has been delayed indefinitely.

Given that weapon-usable fissile material anywhere represents a potential security threat everywhere, countries should be able to expect a certain amount of transparency about each other’s holdings. Declassification of past production and current inventories in broad categories would also strengthen the basis for deeper reductions. For example, the US government is unlikely to commit to further equal reductions of stockpiles of weapons plutonium

because it believes that Russia’s residual stockpile is already twice as large as its own. Russia’s secrecy makes impossible the discussion of other possible reduction formulas – for example, to equal levels.

Russia’s Ministry of Atomic Energy (MinAtom) has agreed to carry out a US-financed study of the production, current stocks and disposition of its civilian plutonium. However, the Administration did not include funding for this project in its proposed budget for FY 2002. This effort should be funded and extended to include military plutonium. The publication of how much military plutonium the US possesses has not threatened its security. Nor would it endanger Russia.

### **End production**

After the end of the Cold War, the US, Russia, U.K. and France all announced that they had ended production of fissile material for

*continued on p. 6*

weapons and China made known its production moratorium.<sup>11</sup> Only Israel, India and Pakistan are believed to be producing HEU and/or plutonium for weapons purposes today.

**Plutonium.** In Russia, however, three production reactors in Siberia continue to operate, producing together about 1 ton of separated weapon-grade plutonium a year. The by-product heat from these reactors is required by the district heating systems of the nearby cities. During the early Clinton Administration, an agreement was made for US/Russian co-funding of the replacement of these reactors with alternative sources of heat and power. The first proposal was to replace the reactors with natural gas-fueled turbines. Then, when sufficient gas pipeline capacity was not available and Russia's national gas utility, GasProm, was not willing to build it without US financing, the focus shifted to new coal-fired replacement plants. Then, when the costs of these plants grew to about a billion dollars, the focus shifted to converting the reactors to a fuel that could be stored so that chemical reprocessing and plutonium separation would not be necessary. Most recently, when the costs of that conversion effort began to climb and the new core design began to encounter problems in the licensing process, the focus switched to replacement with refurbished coal and oil-fired plants for a total estimated cost of about \$420 million.<sup>12</sup>

However, for the past two years, the Republican staff of the House Armed Services Committee has opposed the use of DoD funds for fossil fueled replacements. This year they were joined in their opposition by the Bush Administration's political appointees in the DoD. The National Security Council refused to intervene with the House Republican leadership in defense of the White

House budget. The Senate, which supported the program, was able only to prevent the ban from extending beyond FY 2002.

Transparency seems to be working with regard to the end of US and Russian plutonium production for weapons. The two countries have implemented a 1994 agreement to inspect each other's shutdown plutonium-production reactors. As of October, they were also about to implement an agreement under which Russia would allow the US to monitor the storage and disposition of the plutonium separated from the production-reactor spent fuel produced from 1997 until their shutdown. However, the future of this transparency agreement is uncertain, given that it was contingent on US support for the reactor-conversion project.

Russia is also still separating annually 1-2 tons a year of civilian, but weapon-usable, plutonium from the spent fuel discharged from Soviet-designed power reactors in Eastern Europe, Ukraine and Russia. Because the economics for this activity are unfavorable, foreign customers are opting for spent-fuel storage instead of reprocessing and the domestic customers are likely to follow.<sup>13</sup> The Clinton Administration offered a \$70 million package of assistance if Russia would accelerate the phase-out of this "reprocessing" business. The negotiations broke down because the US linked \$20 million of the joint R&D to a Russian agreement to build no more power reactors in Iran. These negotiations should be restarted and completed. Ending Russia's reprocessing would be very much in the US interest even without this linkage. After Sept. 11, the US is also in a good position to press for an accelerated phaseout of commercial reprocessing in Britain, France, Japan and India as well.

**HEU.** There is no mutual verification of the US and Russian cutoffs on the production of highly-

enriched uranium. However, the US enrichment plant that remains in operation has been transferred to a private company, USEC, which is limited to producing uranium enriched to less than 5.5% U-235 for power-reactor fuel.<sup>14</sup> One of Russia's enrichment plants is licensed to produce HEU enriched up to 30%.<sup>15</sup> However, a small fraction of Russia's stock of excess weapon-grade uranium would suffice to supply HEU fuel for its research and naval-reactor for many decades.

Given Russia's sales of surplus weapon-grade uranium to the US, it is surprising that verification of its nonproduction of HEU has not become an issue in the US domestic debate. It would be desirable to preempt such a debate by allowing the International Atomic Energy Agency to inspect and implement remote monitoring at US and Russian enrichment plants to verify that they are not producing HEU. This transparency could be incorporated into an agreement to provide Russia with the funding to accelerate the blend-down of its excess HEU (see below).<sup>16</sup>

HEU use in US nongovernmental and US exported research reactors has dropped dramatically because of the US Reduced Enrichment Research and Training Reactor program which is converting research reactors from HEU to LEU.<sup>17</sup> However, the cooperative US-Russian effort to convert Soviet-designed research reactors to LEU has been moving very slowly. The impediments to rapid progress should be fixed. During the Gulf War, we were concerned about the weapon-grade uranium in the fuel of Iraq's French-built research reactor. During the Balkan Wars, we worried about the highly-enriched uranium fuel of Yugoslavia's research reactor. And today, we worry about security at research reactors in Kazakhstan that are fueled by weapon-grade uranium. At some point, unless we

take urgent and comprehensive action, our luck will run out.

US and British naval reactors are also fueled with weapon-grade uranium – as are Russian icebreaker reactors. Russian naval reactors use HEU of lesser but still weapon-usable enrichment. Efforts should be mounted to design reactors fueled by non-weapon-usable low-enriched uranium (less than 20% U-235) for future nuclear-powered ships. An immediate focus should be on the next generation of Russian nuclear icebreakers and Russia's proposed barge-mounted nuclear power plants.<sup>18</sup>

### Dispose of excess stocks

**HEU.** Russia continues to carry out its contract to blend down 500 metric tons of weapon-grade uranium from excess Soviet nuclear warheads for sale to the US for low-enriched power-reactor fuel. As of the end of August 2001, 125 tons of WgU had been blended down and delivered and Russian government officials have indicated on a number of occasions the availability of additional excess HEU. At the scheduled rate of blend-down of 30 metric tons per year, however, disposal of the first 500 tons will not be completed before 2013.

The uranium market cannot absorb the additional low-enriched uranium without ruining the weakest enrichment company. This market constraint could be broken, however, by having governments finance an accelerated blend-down of Russia's excess weapons uranium to, for example, 19.9% enrichment, the level at which, according to international agreement, enriched uranium is no longer weapon-usable. This partially blended-down uranium could be stored and blended down further for sale as the market requires.<sup>19</sup>

The US has declared excess much less HEU than Russia: only 174 tons, 80% of it less than

weapon-grade.<sup>20</sup> This is in part because the US started with a smaller inventory and in part also because it is building a stockpile of weapon-grade uranium big enough to support its naval-reactors for "many decades."<sup>21</sup> At some point this huge US stockpile of WgU for naval-reactor fuel will become an issue. Questions will arise as to whether it is appropriate to stockpile sufficient WgU to make on the order of ten thousand warheads. The US and Britain could preempt these problems – and reduce the danger of other countries using their naval-reactor programs to justify HEU

mixed-oxide (MOX, uranium-plutonium) fuel-fabrication facilities in Russia and convert some of Russia's light-water reactors (LWRs) and breeder reactor to be able to use MOX fuel safely.<sup>23</sup> Thus far, sufficient funding commitments have not been forthcoming to allow this program to move forward. Even if the funds could be raised, the absorptive capacity of the small fleet of reactors that Russia could convert is estimated at about 2 tons of plutonium per year. This is grossly inadequate. Russia's current stockpiles of excess weapons and civilian plutonium total 66 tons and could

### Summary of Recommendations

- Accelerate, unblock, and upgrade fissile-material security programs.
- Declare fissile material stockpiles.
- Make the halts in Russian and US highly-enriched uranium (HEU) production internationally transparent.
- Refurbish local fossil-fueled power plants to allow Russia's three operating plutonium-production reactors to shut down.
- Accelerate the phase-out of commercial plutonium separation worldwide.
- Accelerate the conversion of HEU-fueled research reactors to low-enriched uranium.
- Develop low-enriched uranium fueled reactors so that it will not be necessary to use HEU fuel in future US, Russian, and British nuclear-powered ships.
- Accelerate the blend-down of stocks of excess HEU.
- Use Europe's excess light-water reactor capacity to help absorb Russia's excess plutonium.

production<sup>22</sup> — by following France's example and designing their future naval reactors to operate on LEU.

**Plutonium.** Russia and US have each committed to dispose of 34 tons of weapon-grade plutonium. In addition, the US plans to dispose of its complete stockpile of 18 tons of non-weapon-grade but weapon-usable plutonium. However, Russia has conditioned its commitment on an estimated \$2 billion of foreign financial assistance to build and operate plutonium-oxidation and

easily double as a result of future declarations of excess weapon plutonium.

The cost of disposing of Russia's excess plutonium could be reduced to about \$1 billion and the reactor bottleneck removed if one or more of the Western European countries that already use MOX fuel as a means to dispose of their stockpiles of civilian plutonium were willing to buy fuel made with Russian weapons plutonium.<sup>24</sup> If Russia would agree

*continued on p. 8*

# Animal Disease Project Aids Effort to Investigate Anthrax Attack

By Dorothy Preslar

The use of anthrax, a livestock disease, as a biological weapon against American citizens sent journalists scrambling for information on the pathogen and its availability to terrorists, and led members of Congress to propose tighter restrictions on the transfer of biological material out of germ banks maintained by laboratories and other facilities. The FAS Animal Disease Project moved quickly to supplement anthrax information on our website (Mapped Outbreaks in the US 1997-2001, and Misconceptions About Anthrax) and to create a resource section on agroterrorism.

In addition to the website and response to media inquiries, the project was successful in working with staff of Senator Dianne

Feinstein on S. 1661. The new bill seeks to expand the select agent regulations that went into effect in 1997. The proposed legislation would require all laboratories working with listed biological agents to register with the Department of Health and Human Services. Such a requirement would yield information on who is working with what, but would not necessarily document which strains are held by each laboratory, how they were obtained and with whom they have in the past been shared – information that could be invaluable in the event of future events, and highly recommended as a way to close existing gaps in information resources identified by the current bioterrorism investigation.

Beyond informing questions raised by Senator Feinstein in a hearing on bioterrorism before the Senate Judiciary Subcommittee on Technology, Terrorism and Government Information (“Germs, Toxins and Terror: The New Threat to America”) on November 6, FAS has also recommended that the administration of the transfer rules be taken from the CDC (for which it has been an unwelcome assignment) and given to a new office of laboratory security created within HHS. The project worked with staff of Senator Harkin on bioterrorism legislation sponsored by Senators Kennedy and Frist, and with the General Accounting Office, which is exploring the potential for terrorist attacks on US crops and livestock production. □

## Recommendations continued from p. 7

to suspend its civilian reprocessing for at least some decades, this path could also be used to help dispose of its stock of separated civilian plutonium.

Alternative disposition approaches exist<sup>25</sup> but Russia’s nuclear establishment, which still dreams of a future powered by plutonium-breeder reactors, insists that both its and the US excess weapon-grade plutonium must be used in reactor fuel. Perhaps Britain, which also has a huge stock of (mostly civilian) excess plutonium and lacks light-water reactor capacity to dispose of it in MOX fuel, could pioneer non-MOX disposal of separated plutonium.<sup>26</sup>

In the meantime, the estimated life-cycle cost for US plutonium disposition has climbed to \$6.6 billion over 20 years<sup>27</sup> and the Bush Administration has been having second thoughts about the urgency of

this program. This would further undercut the international effort to dispose of Russia’s excess weapons plutonium, since Russia has made its willingness to do so contingent on a parallel US plutonium disposition effort. However, political pressures from states that do not want to become the permanent homes of the US plutonium are helping prevent the jettisoning of the program. □

*The author is Co-Director of the Science and Global Security Program at Princeton University as well as Chair of FAS.*

### NOTES:

<sup>1</sup> “Taking Nuclear Weapons off Hair-Trigger Alert” by Bruce Blair, Harold Feiveson and Frank von Hippel, *Scientific American* 277, #5, November 1997, p. 74, <http://www.sciam.com/1197issue/1197vonhippel.html>.

<sup>2</sup> See e.g. “Can Terrorists Build Nuclear Weapons?” by J. Carson Mark *et al.*, in *Preventing Nuclear Terrorism*, Paul Leventhal and Yonah Alexander, eds (Lexington Books, D.C. Heath, 1987).

<sup>3</sup> Each of these weapons contained an estimated 55 kilograms weapon-grade uranium. David Albright, “South Africa and the affordable bomb,” *Bulletin of the Atomic Scientists*, July/Aug. 1994, p. 37, [www.thebulletin.org/issues/1994/ja94/ja94toc.html](http://www.thebulletin.org/issues/1994/ja94/ja94toc.html).

<sup>4</sup> “The Hazard from Plutonium Dispersal by Nuclear Warhead Accidents” by S. Fetter and F. von Hippel, *Science & Global*

*Security* 2, 1990, p. 21, [www.puaf.umd.edu/faculty/papers/fetter/publications/sags-pu.pdf](http://www.puaf.umd.edu/faculty/papers/fetter/publications/sags-pu.pdf).

<sup>5</sup> O. Bukharin, F. von Hippel and S. K. Weiner, *Conversion and Job Creation in Russia’s Closed Nuclear Cities*, Princeton University, Nov. 2000, <http://www.princeton.edu/~globsec/pubshome.shtml>.

<sup>6</sup> “Mock Terrorists Breached Security at Weapons Plants,” *Chicago Tribune*, October 5, 2001.

<sup>7</sup> Fritz Steinhauser and Lyudmila Zaitseva, *Stanford Institute of International Studies, Data Base on Nuclear Smuggling, Diversion and Orphan Radiation Sources* (2001), cited in M. Bunn and G. Bunn, “Reducing the threat of nuclear theft and sabotage,” IAEA-SM-367/4/08 in 2001 IAEA Symposium on International Safeguards: Verification and Nuclear Materials Security, Oct. 2001.

<sup>8</sup> *MPC&A Strategic Plan* (US DoE, July 2001, <http://www.nn.doe.gov/mpca/frame05.htm>), Fig. 2.

<sup>9</sup> *Renewing the Partnership: Recommendations for Accelerated Action to Secure Nuclear Material in the Former Soviet Union* by Oleg Bukharin, Matthew Bunn, and Kenneth Luongo (Russian-American Nuclear Security Advisory Council, 2000), [www.ransac.org](http://www.ransac.org).

<sup>10</sup> *Plutonium: The First 50 Years* (US Department of Energy Report # DoE/DP-0137, 1996); <http://www.osti.gov/html/osti/opennet/document/pu50yrs/pu50y.html>. Britain declared its total stocks of military plutonium and HEU in 1998.

<sup>11</sup> For references, see Albright, Berkhout, and Walker, *Plutonium and Highly Enriched Uranium 1996* (Oxford University Press, 1997).

<sup>12</sup> Frank von Hippel and Matthew Bunn, “Saga of the Siberian Plutonium-production Reactors,” *Federation of American Scientists Public Interest Report*, Nov.-Dec. 2000, p. 1, [www.fas.org/faspir/archive](http://www.fas.org/faspir/archive).

<sup>13</sup> F. von Hippel, “Plutonium and Reprocessing of Spent Nuclear Fuel,” *Science* 293, Sept. 28, 2001, pp. 2397-2398.

<sup>14</sup> “NRC Approves Higher Enrichment-Level Operations At Paducah Plant,” USEC, March 19, 2001, [www.usec.com/v2001\\_02/Content/News/NewsTemplate.asp?page=v2001\\_02/Content/News/NewsFiles/03-19-01](http://www.usec.com/v2001_02/Content/News/NewsTemplate.asp?page=v2001_02/Content/News/NewsFiles/03-19-01).

<sup>15</sup> The Ural Electrochemistry Combine at Sverdlovsk-44.

continued on p. 10

## Carving Away at Conventional Arms Controls in the Name of Fighting Terrorism

By Tamar Gabelnick

The need to build international support for US counter-terrorism activities has provided a heyday for arms makers in this country as the Bush administration quickly turned to arms sales as the easiest way to make and keep friends. Soon after the attacks, when it became clear that Pakistan would be a key player in the counter-terrorism effort, President Bush lifted the nuclear-related sanctions on Pakistan, as well as India (to play fair). But because additional legal restrictions were still blocking arms exports to Pakistan and other states, the administration included a provision in the anti-terrorism bill sent to Congress in mid-September that would have swept aside all arms export controls for the next five years. Ironically, the proposed language would also have allowed counter-terrorism and non-proliferation aid to go to states that had not been cooperating on terrorism or that had particularly egregious human rights records.

After strong opposition was voiced by members of Congress and the arms control community (see below for FAS activities), this proposal was later amended to lift the remaining barriers on arms and aid to Pakistan only for two years. The law that eventually passed exempts Pakistan from a ban on aid to governments that undergo a military coup; allows for greater

flexibility for Pakistan on sanctions related to Military Technical Control Regime or Export Administration Act violations; and exempts Pakistan from restrictions on aid relating to loan defaults. The law also shortens the congressional notification period for transfers of weapons of excess US weaponry to any country if the transfers would respond to or prevent international acts of terrorism.

The Arms Sales Monitoring Project (ASMP) helped fight off the Bush administration's original all-encompassing proposal and spoke out against the waivers for Pakistan and India. Project Director Tamar Gabelnick had a letter printed in the *Washington Post* opposing a blanket waiver. FAS also wrote a letter to Congress expressing concern about pushing aside long-term foreign policy goals in order to win short-term diplomatic gains. The ASMP and coalition partners put out an action alert to grassroots groups and organized a large "drop" of organizational statements and other information to all congressional offices. The ASMP also created a page on the relationship between US arms exports and the fight against terrorism as part of FAS' site on the subject (<http://www.fas.org/terrorism/at/index.html>).

The struggle to preserve export controls is far from over, however. Having lost the first major battle, the

administration and some members of Congress seem prepared to pick off future targets one by one. The Senate recently approved an amendment to the Foreign Operations Appropriations bill to remove restrictions on arms and military aid to Azerbaijan, which had been prohibited from receiving aid because of the ongoing conflict in the Armenian-majority enclave of Nagorno-Karabakh. The administration is already talking about lifting restrictions on military aid and arms to Indonesia put in place after the massacres in East Timor. Plans are also underway to increase military aid to the Philippines and to send more excess defense articles to Turkey.

Vigilance will now be key for those who monitor arms exports. From preventing incendiary sales to rivals India and Pakistan to deterring new waivers on critical export controls, we will need to keep a close eye on the administration's activities. FAS seeks to work closely with allies in Congress in this regard. We are planning a meeting with key congressional staff and other arms control NGOs in the near future to discuss a strategy for preventing the administration from winning their "salami tactics," where slice by slice the entire system of export controls are carved away. □

### *About the Enclosed Envelope ...*

A special issue of the FAS newsletter dated October 10, 1951 asks, "Scientists! Do We Still Need FAS?" FAS membership declined to just a few hundred members within its first six years. Had FAS outlived its usefulness by 1951?

Today, if we ask the same

question about whether we need FAS, the answer would be affirmative, as it was in 1951. The world still needs the input of scientists because policy makers lack understanding of the science and technology issues underlying national security and other policy decisions.

FAS has more than 2,000 engaged and paying members—and to sustain our effectiveness as the "scientists' lobby," we rely on you for support. The enclosed envelope is an opportunity to provide a special donation for our research and advocacy efforts in 2002. □

By Michael Levi

In the wake of the September 11 terrorist attacks, nuclear security has taken on its highest profile since the end of the Cold War. FAS, in an ideal position to inform and influence the debate, is acting on many fronts to promote enlightened policy directions.

In October, FAS sponsored a meeting in Berlin of policy makers, military officials, and academics from the US, Russia and Europe where participants discussed how to move forward on fissile materials protection, nuclear cuts, and missile defense. The meeting was co-sponsored with the Center for Arms Control, Energy and Environmental Studies of the Moscow Institute of Physics and Technology and the Frankfurt Peace Research Institute. Planned before September 11, the meeting took on special importance, providing participants the opportunity to explore the newly transformed security landscape. An important outcome of the meeting was a plan for a series of joint international studies.

FAS also held an evening forum in Washington, DC including staff

from the Senate Foreign Relations Committee and the offices of Senators Daschle, Biden, Lieberman, Harkin and Bingaman and of Congressman Markey, to identify policy priorities. The suggestions from the meeting are helping us define priorities for the next year. Policymakers were eager for independent analysis of crude terrorist nuclear threats, which we are studying.

On November 8, FAS held a well-attended press briefing *Fewer, but Loose and More Likely to be Used?: Leading Scientists Map the Transformed Nuclear Weapons Landscape*. Briefers talked about nuclear terrorism, missile defense, nuclear force reductions, the Comprehensive Test Ban Treaty, and low-yield nuclear weapons. They also discussed how current efforts fit into the broader arms control picture. The public press event was supplemented by several private meetings with reporters and editorial boards in Washington, DC and in New York. In conjunction with the events, FAS released a package of background papers addressing the issues dis-

cussed. That package, and a transcript of the briefing, can be found on the FAS website.

We organized a Nobel Laureate letter campaign asking Congress not to fund any activities inconsistent with the ABM Treaty (see page 3).

At this point, public attention remains centered on the immediate war against terrorism. To improve public understanding, we developed an extensive webpage that includes resources on terrorist activities, weaponry and the geopolitical context for current events. The page also links to detailed information that FAS staff has collected on strategic issues and domestic threats such as biological and chemical weapons. The New York Times recommends the FAS site in its November 5 article on informative Internet links, and identified FAS' section on bioterrorism as one of "two stand[ing] out for providing an excellent overview." FAS' Strategic Security, Animal Disease, ASMP, and the Biological and Chemical Weapons projects collaborated on the site. □

### Recommendations continued from p. 8

T.B. Cochran, R.S. Norris, and O.A. Bukharin, *Making the Russian Bomb* (Westview Press, 1995), p. 187.

<sup>16</sup> The design of IAEA monitoring at Russian centrifuge enrichment plants could be based on its monitoring of a centrifuge plant exported by Russia to China, the Shaanxi Plant at Han Zhang. IAEA, *Annual Report, 1999*, Table A20, [www.iaea.org/worldatom/Documents/Anrep/Anrep99/07\\_annex.pdf](http://www.iaea.org/worldatom/Documents/Anrep/Anrep99/07_annex.pdf).

<sup>17</sup> US exports of HEU dropped from an average of about 1500 kg/yr in the late 1960s to near zero in the 1990s. Alan J. Kuperman, "Civilian Highly Enriched Uranium and the Fissile Material Convention: Codifying The Phase-Out Of Bomb-Grade Fuel For Research Reactors," paper presented at a Symposium on "The Scope of a Fissile Material Convention," sponsored by the UN Institute for Disarmament Research and the Oxford Research Group, Geneva, Switzerland, Aug. 29, 1996 ([www.nci.org](http://www.nci.org)). In 2000, the following countries had HEU-fueled research reactors with significant HEU inventories: Argentina, Australia, Austria, Belgium, Canada, Chile, China, Czech Republic, France, Greece, Germany, Hungary, India, Israel, Italy, Jamaica, Japan, Kazakhstan, N. Korea, Libya, Mexico, Netherlands, Poland, Portugal, Romania, Russia, S. Africa, Switzerland, Taiwan, Ukraine, UK, US, Uzbekistan, Vietnam, and Yugoslavia. *Research Reactor Database, IAEA, Sept. 2000*, [www.iaea.org](http://www.iaea.org).

<sup>18</sup> C. Ma & F. von Hippel, "Ending the Production of Highly Enriched Uranium for Naval Reactors," *Nonproliferation Review* 8, #1 (2001), p. 86, <http://cns.mii.edu/pubs/npr/>

[vol08/81/abs81.htm#uranium](http://vol08/81/abs81.htm#uranium).

<sup>19</sup> Matthew Bunn, *The Next Wave: Urgently Needed New Steps to Control Warheads and Fissile Material*. Washington, DC and Cambridge, MA: Carnegie Endowment for International Peace, and the Managing the Atom Project, 2000, p. 99.

<sup>20</sup> US DoE, "Disposing of Surplus US Highly Enriched Uranium," <http://www.doe-md.com/heumain.htm>

<sup>21</sup> Director, US Office of Naval Nuclear Propulsion, *Report [to Congress] on Use of Low Enriched Uranium in Naval Nuclear Propulsion*, 1995, p. 31.

<sup>22</sup> Recall that Brazil's centrifuge enrichment program was justified by the need to produce enriched uranium for nuclear submarines (See "Ending the Production of Highly Enriched Uranium for Naval Reactors").

<sup>23</sup> *Cost Estimates for the Disposition of Weapons-Grade Plutonium Withdrawn from Russian Nuclear Military Programs*, 2nd report of the joint US-Russia working group on cost analysis and economics in plutonium disposition, March 2001, [http://www.doe-md.com/ru\\_docs.asp#MOX](http://www.doe-md.com/ru_docs.asp#MOX)

<sup>24</sup> The obvious candidates are Belgium, France, Germany, and Switzerland. According to the cost calculations, roughly \$700 million would be required for R&D and design and construction of facilities to convert the plutonium from metal to oxide and fabricate the MOX fuel, and for transportation and storage infrastructure. Approximately an addition \$1 billion would be required for operation. At 4% plutonium content, 34 tons of plutonium would be turned into MOX fuel with 850 tons of heavy-metal content. This plutonium would displace LEU fuel worth roughly \$1000/kg.

<sup>25</sup> See e.g. Allison MacFarlane, Frank von Hippel, Jungmin Kang and Robert Nelson, "Plutonium Disposal, the Third Way," *Bulletin of the Atomic Scientists*, May/June 2001 [http://www.thebulletin.org/issues/2001/mj01/mj01\\_vonhippel.html](http://www.thebulletin.org/issues/2001/mj01/mj01_vonhippel.html)

<sup>26</sup> See F. Barker and M. Sadnicki, *The Disposition of Civil Plutonium in the U.K.* (2001), available from [sadnicki@aol.com](mailto:sadnicki@aol.com).

<sup>27</sup> *Report to Congress on the Projected Life-cycle Costs of US and Russian Plutonium Disposition Programs* (Draft, National Nuclear Security Agency, Office of Fissile Materials Disposition, March 30, 2001).

<sup>28</sup> Estimates cited in Albright, Berkhout, and Walker, *Plutonium and Highly Enriched Uranium 1996* (Oxford University Press, 1997).

<sup>29</sup> *ibid*

<sup>30</sup> Author's estimates, based primarily on governmental declarations to the IAEA INFCIRC/549 - Communication received from certain member states about their policies regarding the management of plutonium, <http://www.iaea.org/worldatom/Documents/Infcirc>

<sup>a</sup> Bill Hoehn, Russian-American Nuclear Security Advisory Committee, private communication, Nov. 6. For updates, please contact him at 202-332-1412 or [bhoehn@ransac.org](mailto:bhoehn@ransac.org).

<sup>b</sup> Proposed expenditures over 8-10 years divided by nine except for the production reactors. NA denotes programs that were not broken out in the Baker-Cutler recommendations. *Final Report, Task Force on DoE Nonproliferation Programs in Russia*, Howard Baker and Lloyd Cutler, co-chairs, January 2001, <http://www.hr.doe.gov/seab/rusrpt.pdf>.

By Steven Aftergood

The war on terrorism has been accompanied by a far-reaching reconsideration of government information policy. Some have questioned whether the very openness that characterizes our political system is a weakness because it provides information that could be used against us by terrorists.

The Bush Administration's rather consistent approach has been to clamp down on the disclosure of information across the board, restricting public access even to various kinds of unclassified and historical information.

The FAS Project on Government Secrecy is predicated on the notion that secrecy and security are two different things, and that indiscriminate secrecy — no less than indiscriminate disclosure — can undermine security by disabling our political institutions. Accordingly, we have found much to criticize in the Bush Administration policies.

### How much should Congress know?

While one can debate exactly how much information about the war on terrorism should be made public, it is harder to argue that Congress should be kept in the dark. Yet that seems to be the Administration's preference.

In an October 5 memo obtained by FAS and published on our web site, President Bush directed that no more than eight members of Congress should receive classified briefings about the war. Not even the leadership of the Armed Services and Foreign Relations Committees were to be kept in the loop.

Washington has no fury like a committee chairman scorned, however, and so the Administration was compelled to disavow these restrictions after just a few days.

But despite this awkward reversal, some members of Congress

complain that the quality of the briefings they receive is still inadequate. For example, Sen. John McCain, a member of the Armed Services Committee, recently said that he gets "no information" from the briefings and sees "no reason" to attend them. The quality of congressional oversight can only suffer as a consequence, to the ultimate detriment of national policy.

### How much should the FOIA disclose?

The Freedom of Information Act (FOIA) is the lever that permits Americans to move the world of government information. It is the law that establishes and defines the public's right to know what the government is doing.

Of course, there are numerous exemptions built into the law to protect classified, personal, and proprietary information, among other categories. But the whole thrust of the law is to promote public access to information.

Now a new Bush Administration FOIA policy encourages government officials to withhold information from disclosure whenever they possibly can. Past policy (in theory) was to release information unless "foreseeable harm" could result. But on October 12, Attorney General Ashcroft told agencies to deny requests for access to information whenever there was any legal argument for doing so, regardless of whether or not harm would result.

The upshot is already evident in a pattern of increased denials of public requests for information. It is a worrisome trend that must be challenged.

### How much should the public know about the past?

On November 1, the Bush Administration took time out from

the war on terrorism to issue a new executive order that will make it more difficult for Americans to gain access to historical records generated by past Presidents.

Specifically, the new order allows past Presidents as well as the incumbent President to veto public access to historically valuable presidential records by asserting executive privilege. Remarkably, the order purports to grant executive privilege even to the surviving family members of a deceased President, a true innovation in government secrecy.

Since classified, privacy, and other forms of information are already protected from disclosure, the new executive order invites the suspicion that it is intended to shield embarrassing information, a category for which an explicit exemption does not exist.

Fortunately, this seemingly gratuitous new policy has inspired an impressive degree of resistance, including congressional calls for it to be rescinded.

These are just a few of the latest developments in secrecy policy. Others include new limits on the freedom of Pentagon employees to communicate with the public; new restrictions on government web sites, which are being substantially curtailed; and, not least important, the development of a new executive order on classification and declassification policy.

The FAS Project on Government Secrecy works to illuminate these and other important information policy areas. We research and publish original source documents, generate critical commentary, and provide information support to journalists and editorial writers. It looks like our plate is going to be full. □

## **Emergency Response to Biological & Chemical Weapons Events: An Online Training Program**

*By Van Blackwood*

Following the recent anthrax attacks, FAS received a multitude of inquiries not only from the media, but also from emergency response personnel. The emergency response personnel sought readily available technical guidance on how to handle potential bioterrorism events. A review of available online material revealed that there is existing information on the web, but it is often difficult to find and of minimal value to those who would have to respond directly to a bioterrorism attack.

The FAS, through its Chemical and Biological Arms Control Project, has initiated an effort that will provide efficient, accurate, up-to-date online training opportunities for nurses, paramedics, public health officials, police, and other individuals who may find themselves responding to emergencies involving biological or chemical weapon attacks. This will include a comprehensive online reference library as well as online courses that can be used for background training or “just in time” learning.

We are recruiting individuals and groups with material and skills useful to the project and/or representing groups such as nursing associations that will need to use the materials. The core of the team includes the Nursing Schools at Vanderbilt and the University of Wisconsin system.

Topics that will be addressed include identifying symptoms of CBW attacks, recommended treatments, safety procedures for medical and emergency personnel, where to go for assistance, and methods for identifying and isolating contaminated sites.

Over the next few months, we will:

- Define a detailed curriculum of materials that should be mastered by the target audience. This will begin with anthrax and will be expanded to cover other biological and chemical agents.
- Create an informal “editorial board” that will quickly review materials to be posted to ensure its accuracy.

- Collect and post on the FAS website reference materials and up-to-date literature in an easily accessible and searchable format.
- Collect and post available courses and course components relevant to the topic.
- Identify institutions offering courses.
- Identify individual experts willing to participate in teaching online courses (answering on-line questions, etc.).
- Establish priorities for building online courses using available materials and expertise.
- Use authoring tools to build and make available new curricular materials quickly in high-priority areas.

More information can be found on the FAS website at [www.fas.org/bwc](http://www.fas.org/bwc) or call Van Blackwood at 202/ 454-4686. □

**FAS PUBLIC INTEREST REPORT** (202) 546-3300  
1717 K Street NW Suite 209 Washington, D.C. 20036; [fas@fas.org](mailto:fas@fas.org)  
NOVEMBER/DECEMBER 2001, VOLUME 54, No. 6

**ADDRESS SERVICE REQUESTED**

**Periodicals  
Paid at  
Washington, D.C.**