

**AN EXAMINATION OF THE REPORT OF THE  
HOUSE SELECT COMMITTEE ON U.S. NATIONAL  
SECURITY AND MILITARY/COMMERCIAL CON-  
CERNS WITH THE PEOPLE'S REPUBLIC OF  
CHINA**

---

---

**HEARING**

BEFORE THE  
INTERNATIONAL SECURITY, PROLIFERATION, AND  
FEDERAL SERVICES SUBCOMMITTEE  
OF THE  
COMMITTEE ON  
GOVERNMENTAL AFFAIRS  
UNITED STATES SENATE  
ONE HUNDRED SIXTH CONGRESS  
FIRST SESSION

—————  
MAY 26, 1999  
—————

Printed for the use of the Committee on Governmental Affairs



U.S. GOVERNMENT PRINTING OFFICE

59-590 cc

WASHINGTON : 2000

COMMITTEE ON GOVERNMENTAL AFFAIRS

FRED THOMPSON, Tennessee, *Chairman*

WILLIAM V. ROTH, Jr., Delaware	JOSEPH I. LIEBERMAN, Connecticut
TED STEVENS, Alaska	CARL LEVIN, Michigan
SUSAN M. COLLINS, Maine	DANIEL K. AKAKA, Hawaii
GEORGE V. VOINOVICH, Ohio	RICHARD J. DURBIN, Illinois
PETE V. DOMENICI, New Mexico	ROBERT G. TORRICELLI, New Jersey
THAD COCHRAN, Mississippi	MAX CLELAND, Georgia
ARLEN SPECTER, Pennsylvania	JOHN EDWARDS, North Carolina
JUDD GREGG, New Hampshire	

HANNAH S. SISTARE, *Staff Director and Counsel*

JOYCE A. RECHTSCHAFFEN, *Minority Staff Director and Counsel*

DARLA D. CASSELL, *Administrive Clerk*

---

INTERNATIONAL SECURITY, PROLIFERATION, AND FEDERAL SERVICES  
SUBCOMMITTEE

THAD COCHRAN, Mississippi, *Chairman*

TED STEVENS, Alaska	DANIEL K. AKAKA, Hawaii
SUSAN M. COLLINS, Maine	CARL LEVIN, Michigan
PETE V. DOMENICI, New Mexico	ROBERT G. TORRICELLI, New Jersey
ARLEN SPECTER, Pennsylvania	MAX CLELAND, Georgia
JUDD GREGG, New Hampshire	JOHN EDWARDS, North Carolina

MITCHEL B. KUGLER, *Staff Director*

RICHARD J. KESSLER, *Minority Staff Director*

JULIE A. SANDER, *Chief Clerk*

## CONTENTS

Opening statements:	Page
Senator Cochran .....	1
Senator Akaka .....	2
Senator Lieberman .....	3
Senator Levin .....	5
Senator Thompson [ex officio] .....	5
Senator Collins .....	6
Senator Spector .....	6

### WITNESSES

WEDNESDAY, MAY 26, 1999

Hon. Christopher Cox, a Representative in Congress from the State of California .....	7
Hon. Norman D. Dicks, a Representative in Congress from the State of Washington .....	9

### ALPHABETICAL LIST OF WITNESSES

Cox, Hon. Christopher:	
Testimony .....	7
Dicks, Hon. Norman D.:	
Testimony .....	9

### APPENDIX

Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China, Report Overview .....	51
An article from <i>The New York Times</i> , May 26, 1999, entitled "America's Stolen Secrets" .....	82
An editorial from <i>The Washington Times</i> , May 26, 1999, entitled "The Cox Report" .....	84
An article from <i>The Washington Post</i> , May 26, 1999, entitled "Nuclear Pick-pocket" .....	86
An article from <i>The Wall Street Journal</i> , May 26, 1999, entitled "The Banquo Report" .....	87
List of General Accounting Office Reports on DOE Security Issues .....	88

**AN EXAMINATION OF THE REPORT OF THE  
HOUSE SELECT COMMITTEE ON U.S. NA-  
TIONAL SECURITY AND MILITARY/COMMER-  
CIAL CONCERNS WITH THE PEOPLE'S RE-  
PUBLIC OF CHINA**

WEDNESDAY, MAY 26, 1999

U.S. SENATE,  
SUBCOMMITTEE ON INTERNATIONAL SECURITY,  
PROLIFERATION, AND FEDERAL SERVICES,  
OF THE COMMITTEE ON GOVERNMENTAL AFFAIRS,  
*Washington, DC.*

The Subcommittee met, pursuant to notice, at 3:12 p.m. in room 342, Senate Dirksen Building, Hon. Thad Cochran, Chairman of the Subcommittee, presiding.

Present: Senators Cochran, Lieberman, Akaka, Collins, Levin, Specter, Torricelli, and Thompson [ex officio].

**OPENING STATEMENT OF SENATOR COCHRAN**

Senator COCHRAN. The Subcommittee will please come to order.

We appreciate very much everyone's patience and we especially appreciate the effort that our colleagues from the House have made to be with us today.

We are conducting a hearing of our Subcommittee to examine the report released yesterday by the House Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China.<sup>1</sup>

I'm going to put my opening statement in the record and invite our witnesses to proceed to discuss with the Subcommittee the findings they made and the report which they have released.

[The prepared statement of Senator Cochran follows:]

**PREPARED OPENING STATEMENT OF SENATOR COCHRAN**

I'd like to welcome everyone to today's hearing of the Governmental Affairs Subcommittee on International Security, Proliferation, and Federal Services. Today we will examine the unclassified report, released yesterday, of the House Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China.

In his Pulitzer Prize-winning book *The Making of the Atomic Bomb*, Richard Rhodes writes that General Leslie Groves, head of the World War II Manhattan Project, laid down specific criteria for selecting a site to develop the world's first atomic bomb. According to Rhodes, General Groves specified that this site had to

<sup>1</sup>The report referred to appears in the Appendix on page 51.

have, "room for 265 people, location at least 200 miles from any international boundary but west of the Mississippi, some existing facilities, a natural bowl with the hills nearby that shaped the bowl so that fences might be strong on top and guarded." Clearly, the need for securing America's nuclear secrets has been of paramount importance since the start of the American nuclear program.

Espionage has also been with us since the beginning of the nuclear program, and as has become so apparent recently, has led to the loss of valuable information.

But espionage is not the only way in which the United States has lost sensitive technology, nuclear or otherwise. Because export controls on dual-use technology have been so significantly relaxed in the last 6 years, and not just for supercomputers and satellites, much technology and know-how that can be of great military assistance to other countries has flowed from the United States.

These, and other, issues are examined in detail in the report before us today. Because of this report, and its classified companion, Congress is better prepared to determine accountability for this damage to U.S. National Security and to legislate as necessary to avoid further such damage.

Since 1997 this Subcommittee has held nine hearings on some of the specific topics covered by the House Select Committee's work, ranging from hearings on supercomputer export controls to commercial satellite transfers to the proliferation activities of the People's Republic of China. We are very pleased to have with us today to discuss their important report Chris Cox, Chairman, and Norm Dicks, Ranking Member, of the House Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China.

They deserve the highest praise for the outstanding job they have done on this difficult assignment. It is because of their dedication, hard and thorough work, and willingness to set aside partisan differences that they have produced a report that will define the meaning of "oversight" for many Congresses to come.

Gentlemen, we look forward to your sharing with us the results of your investigation.

Senator COCHRAN. We are very pleased to have with us today to discuss this important report the Chairman and the Ranking Member of the House Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China, Congressman Chris Cox of California and Congressman Norm Dicks of Washington. They deserve the highest praise for the outstanding job they have done on a very difficult assignment.

It is because of their dedication, hard work, and willingness to set aside partisan differences that they have produced a report that will define the meaning of oversight for many Congresses to come. Gentlemen, we welcome you to the Subcommittee.

I'm going to yield to my colleagues for any comments they have and then we will hear from you.

Senator Akaka.

#### **OPENING STATEMENT OF SENATOR AKAKA**

Senator AKAKA. Thank you very much, Mr. Chairman.

I'm pleased to join you in welcoming our colleagues from the House, Mr. Cox and Mr. Dicks. They and their colleagues on the Select Committee have done the country a great national service in producing the report which we are discussing this afternoon.

I want to emphasize the bipartisan manner in which you conducted your analysis is an example to us all of the importance of placing bipartisanship above political interests for the sake of our Nation's security. I congratulate you, Mr. Cox and Mr. Dicks on a job well done. I thank you for your contribution to improving our national security.

I have been shocked by the extent of the Chinese espionage efforts that have been exposed in your report. I wish we could say that our own efforts and commitments to conquering Chinese espio-

nage was as relentless and as persistent as their ongoing efforts to acquire information from us. I think your report has made an enormous contribution in rectifying that gap.

The President and the entire administration have taken major steps to reform our security at the National and Nuclear Weapons Laboratories and to improve our counterintelligence capability. Many of these changes were ordered by the President in February 1998, well before the House Select Committee was formed.

I think there is no doubt that additional measures were taken as the extent of Chinese espionage became apparent during the Subcommittee's review. Let me make two cautionary statements.

There is a great deal of discussion now in Washington as to whom to blame for the security lapses. There is the usual round of finger pointing and calls for this or that person to resign. Let me say that we should not waste our time searching for scapegoats, only our enemies can take solace when we turn to ourselves. Let us instead focus our attention at improving our security and rooting out those guilty of betraying America.

Second, let us not sacrifice our efforts to build a constructive relationship with the Chinese people because of our collective horror at their government's perfidy.

Much of what has occurred is to our shame for not being vigilant. We need to engage China. We have issues and problems which can only be resolved by cooperation. These include bread and butter issues such as reducing our trade deficit and improving market accessibility for American goods. They include global issues such as global warming and the proliferation of weapons of mass destruction.

The Select Committee's report indicates that despite international commitments to the contrary, China continues to proliferate weapons of mass destruction. To convince China to cooperate with us in ending the threat of proliferation, we will need to engage China.

Our foreign program at the National Laboratories has provided us with one opportunity to engage the Chinese on issues such as improving export controls. With enhanced restrictions, these programs I feel should continue. But engagement is not a one-way street. China needs to demonstrate that it wants to engage the United States in a constructive and cooperative manner. China can choose to swamp us either with spies or with friends. The choice is their's.

I welcome our witnesses once again and I thank them for taking the time to testify before us this afternoon.

Senator COCHRAN. Senator Lieberman.

#### **OPENING STATEMENT OF SENATOR LIEBERMAN**

Senator LIEBERMAN. Thanks, Mr. Chairman. I'll just say a few words.

First, thank you and Senator Akaka for convening this hearing because I do think it's directly within the jurisdiction of our overall Subcommittee, and second, to thank our two colleagues from the House, Congressman Cox and Congressman Dicks, for an extraordinary act of public service and a very thorough, very comprehen-

sive, very credible report that ultimately enjoyed bipartisan support. I appreciate it very much.

For me and so many others, reading the report was an unsettling experience, particularly for those of us who have supported a policy of engagement with the People's Republic of China as the best way to not only gain freedom for its citizens but to gain its peaceful participation in the world community.

This report, showing such broad and deep Chinese espionage efforts against the United States, coming as it does coincidentally after the intentional and outrageous attacks on our embassy in Beijing, I think should give us all reason to pause, not to rush to judgment about a rapid change in our policy toward the PRC, but to try to relate that policy to the reality that we saw on the ground in Beijing a couple of weeks ago and that we read in your very comprehensive report.

It's hard to read the report and not feel angry, both toward the Chinese and honestly, toward ourselves. The Select Committee's report and other revelations that have come with it leave no doubt that the security in our Nation's laboratories has been woefully inadequate for years. The report, in other revelations, raised serious questions about whether once China's successful espionage was discovered, the Department of Energy, our law enforcement agencies, and the administration adequately responded.

In fact, remembering one of President Kennedy's great books, it struck me as I finished reading your report that it might have been titled, "How and Why America Slept." I think you've documented the how. The why probably needs more explanation. Unfortunately, descriptive words like incompetence, gullibility, wishful thinking, and even greed come to mind as possible explanations of the why.

I think if there are two things we should not be in response to your report, they are partisan and defensive. It's clear from your report that China has been carrying out its espionage since the 1970's through administrations of both political parties. It also seemed evident to me that the espionage has gone on through the current administration and that in hindsight, its response after receiving notification was not as rapid as it might have been.

I'm very grateful that the President did issue his decision directive last year aimed at improving security in the labs and that a very vigorous response to this critical problem is now being implemented by Secretary of Energy Richardson.

How damaging was this PRC espionage to America's security? I've heard some say, and I agree, that today it's not very damaging. We have more than 6,000 strategic nuclear warheads while the PRC may have two or three dozen long-range nuclear missiles. But the fact is that as a result of the espionage that you have documented, the People's Republic of China will much sooner and at much less cost have a much greater ability to threaten our allies in the Pacific, to sell their stolen nuclear goods to rogue nations if they wish, and in fact, to strike the United States if they wish. That is a very serious prospect and one I think should not be understated or underestimated as we receive and evaluate your report.

Finally, may I make a brief comment on the issue that I know originally gave rise to the Select Committee, and that is the con-

cern that our export control system is improperly allowing China and other countries to obtain access to sensitive technology through commercial transactions with American companies. In some ways, it has been overlooked or underfocused on because of the allegations of espionage.

I continue to feel strongly that robust trade with China is in our national interest but I am deeply troubled by your report's allegations that some American companies may have put their interest in profits above our shared interest in national security, allegations that the Justice Department and others are now investigating.

The report raises very serious questions, both about the specific business actions that you describe but also about our technology export practices generally. That subject falls directly within the oversight jurisdiction of the Governmental Affairs Committee and I hope will be the focus of further hearings by our Subcommittee.

Senator Cochran and Senator Akaka, let me once again thank you for holding this hearing and I thank our two colleagues for their extraordinary work. I look forward to hearing from them and discussing their report.

Senator COCHRAN. Senator Levin.

#### **OPENING STATEMENT OF SENATOR LEVIN**

Senator LEVIN. Mr. Chairman, I want to thank you and Senator Akaka and our two colleagues for coming over here today during a very busy day over in the House, we all know how that works. Mostly, I want to thank them for working together as bipartisan colleagues and producing a thorough report.

It is really important that now in receiving your report and in considering and reading your report and studying it, that we act with the same kind of bipartisan deliberation that you two showed in producing it. This espionage has been going on for too long and the length of time over which the thefts have occurred and the lost opportunities that we had to stop it and the substance of the information the Chinese Government obtained is obviously very, very troubling.

We've taken many steps in the last few years to try to plug the holes in the facilities that produce our nuclear weapons and design them. The President's Decision Directive took some steps in that direction. The bill on the floor of the Senate right now, which I have to return to manage as the Ranking Democrat, takes some additional steps in that direction. You have made a number of recommendations which I hope we will promptly consider.

Most important, I believe, is that we respond with the same care, thoughtfulness and bipartisanship that you have demonstrated in the production of the report. I want to commend you both on it.

Senator COCHRAN. Senator Thompson.

#### **OPENING STATEMENT OF SENATOR THOMPSON**

Senator THOMPSON. Thank you very much, Mr. Chairman.

I just want to congratulate these gentlemen for what they have been able to do. It was something frankly that we were not able to do in our Committee and that is to have a bipartisan effort. I hope it doesn't mean that it has to be a select committee anymore or that most of your work has to be done behind closed doors. For



whatever reason, you were able to work together and both of you were able to do some things that didn't please your own parties. That's what it takes. That's the only way it can happen anymore in this environment that we have of contentiousness when we're dealing with sensitive matters and especially matters that are sensitive politically.

So not only have you produced a great contribution to your country, you have proven that at least under some circumstances, some people can work together in a bipartisan fashion and withstand the pressures that are on you, the pressures that are on you to this day.

Now that the report is out, I see where everyone is dividing again and trying to get the correct spin and put the pressure on each of you to spin it as much as you can their way. You've done a remarkable job with regard to all of that and I would urge you to continue to resist what you've been able to resist over the last year.

I want to ask you some questions about the Justice Department's role in all this when my time comes. I'll stop with that for right now. Thank you for being with us.

Senator COCHRAN. Senator Collins.

#### **OPENING STATEMENT OF SENATOR COLLINS**

Senator COLLINS. Thank you, Mr. Chairman.

I first want to commend you for holding this important hearing. I know it's a continuation of your longstanding interest in this area. I remember well your raising some alarm bells about the export of high performance computers. You were certainly correct in doing so as this report documents.

I also do want to join in the accolades for the two Congressmen who are here today who have done a tremendous service by their careful and thorough documentation of the enormous breaches in our national security. I found the revelations in your report to be truly shocking and they give me great cause for concern as they do all Americans.

I look forward to hearing about your report in more detail and to asking you some questions.

Again, thank you for your tremendous contribution.

Senator COCHRAN. Senator Specter.

#### **OPENING STATEMENT OF SENATOR SPECTER**

Senator SPECTER. Thank you, Mr. Chairman.

I've been in the Senate for a while, but I've never heard members of the House of Representatives complimented so highly and that is unique. In a Senate proceeding, as Congressman Dicks pointed out, it's unique. I think it is more than unique. It's really extraordinary and I think very well deserved.

The import of what you have submitted is of enormous consequence. The espionage on the neutron bomb and the espionage on the warheads is truly staggering. It goes over administrations which have been both Republican and Democrat, so that there is enough blame to go around on a bipartisan fashion. What has to be done is not to focus on the issue of blame, but to look hard to find ways to be sure that it does not recur in the future.

Your report has brought squarely into the front and center the issue of how we handle exports, how we handle ballistic tests and what we do by way of waivers on satellite launches because if you put the weapons together with the satellite potential, the reality is that American cities and Americans are put at risk, at least by the year 2005. So you've given us a very important starting point.

The secrets were obtained in three ways: One, by espionage, one by voluntary U.S. transfers of technology like the computers and the other on campaign contributions. I think we have to make an assessment as to what has been most cost effective to the Chinese as they have worked those three paths.

Congratulations.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

You may proceed, Mr. Cox. Welcome.

**STATEMENT OF HON. CHRISTOPHER COX, A REPRESENTATIVE  
IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. COX. Thank you, Mr. Chairman.

I wish to thank the Members of this Subcommittee, both for the work you've done on these and related issues prior to the creation of our Select Committee and for the time and attention that you paid to the subject matter even throughout the period of our investigation and declassification of our report. I know several Members of this Subcommittee have come to our secure facility to read the full classified version and to get briefed on various aspects of it.

That acknowledgement of the gravity of the subject matter I think is going to help the Congress see to it that appropriate steps are taken to remedy the problems we've identified.

This is the first day that we'll have the opportunity to talk about much of what is in the report in open session. For that reason, even though Representative Dicks and I have given joint briefings such as this many times in classified session, you may see us bite our tongues from time to time to make sure that we stick to our streamlined script here and leave aside the rest of it.

You can't solve problems you can't talk about—at least not in a democracy—and it's very important that we have this opportunity in open session to talk about the big picture issues illustrated in our report and that is the purpose of our briefing today.

I would say in response to Senator Akaka's point, because I agree with everything he said, we need to anticipate some of what is going to be said about this report from the PRC side. In fact, Ambassador Lee has been giving us the Communist Party line of late. We are going to hear that this is anti-Chinese. The Communist Party takes the view in fact that if you disagree with their policy, you are anti-Chinese.

I think all of us can readily distinguish between what is the Communist Party and what is China. So we are careful in this report always to refer to the PRC and try to avoid in any connotation whatever suggesting we're talking about China's 5,000-year-old culture, Chinese Americans in China or anything of the sort.

The only effort that I know of to contain China, which we are often accused of, is the effort mounted by the Communist Party to contain freedom of the people who live there.

Having said that by way of preamble, I will briefly introduce the contents of our report. We studied in some detail the issue that you also have been interested in on this Subcommittee and that is the Hughes and Loral after accident reviews that, allegedly at the time we began our investigation, had contributed to the advancement of Long March rocket technology and possibly derivatively ballistic missile technology.

Four chapters of our report are devoted to this in various ways. There is a chapter on Hughes, a chapter on Loral, a chapter on the space insurance industry's role in technology transfer to the People's Republic of China and a chapter on the site security at launch site.

Next, we deal with PRC missile and space forces, both where they are today and how they got there, on the one hand, and where we see them headed and the ways in which technology that has been stolen of late might be integrated into those future forces.

Third, there is a chapter on what we have richly discussed in recently days, the theft of thermonuclear warhead design information. We have a chapter on high performance computers which several Senators referenced in their opening remarks.

We are especially interested in this area of export control because now that so many horses are out the barn door, the question arises what can be done. You can't get those nuclear secrets back but is there something we can do to at least postpone the perfection of those thefts to at least prevent, in the short run if not the medium and long run, the weaponization of those designs.

High performance computers are absolutely essential as a tool to weaponizing and maintaining once weaponized, those modern nuclear weapons.

We have focused on our export controls and the manner in which we should address that topic in light of what we now know. Some of our very significant recommendations fall in this area and I think will be of great interest to the Select Committee, in particular, our interest in a multilateral regime of export control.

Presently, and only for the very recent history, we have a unilateral system, one in which each country acts in whatever way it chooses. We had a multilateral regime up until 1994 but at that time COCOM was disbanded 3 years after the collapse of the Soviet Union. It was thought there was no need for multilateral control any longer. For 2 years, we had nothing at all. Then we got Wassenaar and Wassenaar operates on the principle of "national discretion," which is a great euphemism that means every country gets to do whatever it likes.

So now when a CEO comes into your office and says, Senator, I'd love to stop selling things to the People's Liberation Army, but if I don't sell it, some other country will, they are essentially telling it straight because that's the way our system works. When we enforce our export controls against U.S. companies, we find self-abnegation as a national policy doesn't work, we succeed in stopping U.S. companies and perhaps injuring U.S. workers but we get no national security benefit if somebody else fills that gap. We have the worse of both worlds right now.

We have a section on commercial and intelligence operations in the PRC as the opening chapter of our first volume. It's essential

to an understanding of what's going on because we did not discover in our investigation a single incident, we did not discover something that happened during one President's administration. We discovered something that has gone on for some time and if anything, is accelerating but accelerating pursuant to policy determined not only in the State councils but in the Communist Party councils in the People's Republic of China.

I would yield at this point to my colleague.

Senator LEVIN. Mr. Chairman, I hate to announce this, but we have a vote that is occurring on the floor of the Senate and the second bells have rung. I'm going to go over and make that vote, if you would excuse me for doing that. We will be back very quickly though and we will suspend until we can go vote.

[Recess.]

Senator COCHRAN. The Subcommittee will come to order.

When we left, the contents had been reviewed by the Chairman and he had yielded to Senator Dicks—Congressman Dicks. Sorry about that insult, Norm—Congressman Dicks.

Mr. DICKS. I started my career over here on this side, so I'm proud to be over here.

Senator COCHRAN. We're proud you're back. You may proceed.

**STATEMENT OF HON. NORMAN D. DICKS, A REPRESENTATIVE  
IN CONGRESS FROM THE STATE OF WASHINGTON**

Mr. DICKS. First of all, let me say we appreciate very much the very kind remarks about our effort. This was not easy, as you can imagine, doing this is the midst of impeachment, but we had a great Senator from Washington State, Henry Jackson, who used to say "When it comes to national security, the best politics is no politics." I've always believed that and Chris Cox and I were able to work together. We don't agree on every single word in this report but overall, we feel this is a solid piece of work.

Interestingly enough, the issue that we started off on was obviously was there any connection with campaign contributions, but the other was, and the thing we started focusing on was, the U.S. companies—this started under President Reagan—who had gone to China to launch our satellites on their rockets. The reason that happened was because the Challenger accident, we lacked capability within our own country and therefore we had to try to do these launches there.

We set up security procedures and we'll get into that a bit later. In the first three or four slides, the real story is that the companies had failures. There were three separate crashes of these rockets on launching. Because of that, obviously the insurers were very concerned, there was a lot of pressure on Hughes and Loral to get these problems corrected.

Unfortunately, they held post-crash discussions with the Chinese that were not authorized under their license. It was our opinion that they knew about this and they should have gotten the additional license but for whatever reason, chose not to do that. Because of that, very important design and reliability information was transferred. They learned a lot about how we do failure analysis and so that technology and information flowed to them.

Again, on slide four, we mention the dates—1993–1995—Hughes showed the PRC how to improve the design and reliability of PRC military space launch vehicles. Of course this was not appropriate under their license. In 1996, Loral and Hughes showed that the PRC had improved the design and reliability of the guidance systems used in the PRC's newest space launch vehicle. So this happened and the upshot of it is that there could be a potential spinoff here between the space launch rockets and the PRC's long launch rockets which could be used for military purposes—are used for military purposes, for example, military communication and reconnaissance satellites, the launching of those, space-based sensors, space-based weapons they've successfully developed, satellites for modern command and control and sophisticated intelligence collection. We thought this was a very important matter and we spent considerable time on it.

To talk about some of the specific things they benefitted from, one would be missile design, design analysis, testing procedures and the application of technical know-how because of a particular failure analysis.

Mr. COX. I would just add to what Representative Dicks has just said that we also looked very carefully at site security in the People's Republic of China. When President Reagan determined in 1988 that it would be possible in the future for U.S. satellites to be launched atop PRC rockets, one of the premises was that there would be outstanding security that would protect the transfer of technology, protect against that. We have operated on that assumption for many years.

What we learned in our investigation, however, is that no such sound security is provided. These are essentially rent-a-cops that are hired by the satellite firms and are the only thing standing between the People's Liberation Army and our national security.

What we heard in testimony in our closed sessions was that these Pinkerton private security guards would show up to work drunk, they would show up for night duty with sleeping bags and they were more interested in spending time with prostitutes provided for them by the PRC government no doubt than doing their jobs as a consequence of which the satellite was left unattended, the site was not secured and there are literally scores of breaches of security which were not reported to DTSA top management to the Defense Department agency responsible for this that are listed in this report, some of which are very serious indeed.

We cannot say because we were not there that in consequence of any one of these breaches of security, PLA was able to obtain information. We weren't there and we didn't see it, so we don't report that in here. What we do say in this report is that in light of the PRC's aggressive espionage campaign, which we've seen across the board directed against military technology in all areas, it would be surprising if the PRC had not exploited these opportunities.

In a world where we cannot know all the facts, we have to make reasonable inferences and living in the real world as we do, it's a fair inference to draw. Next slide.

It is in the national security interest of the United States to increase domestic, U.S. launch capacity. Again, that 1988 decision to put U.S. satellites on top of Chinese rockets, PRC rockets, was

meant to be a short-term expedient to make up for our lack of launch capacity which we hoped would be temporary, particularly in the wake of the Challenger disaster. Here we are 10 years later seemingly permanently reliant on that arrangement.

Because of the commercialization of space, because of all the commercial opportunities, I think we're tempted to overlook the fact that there is a real national security payoff to having even our commercial satellites launched in the United States. So we are recommending that we urgently put as much energy and effort as we can not only into increasing capacity at Cape Canaveral and at Vandenberg, but also to adding new capacity, for example, utilizing U.S. territorial possessions on the equator, not stinting in any way on what we will do at Cape Canaveral and Vandenberg providing increased capacity. Some of that is underway and we ought to be very supportive of that, but adding to that capacity. There is a national security as well as a commercial payoff to doing that.

In addition to the kinds of tech transfer that occurred in connection with the PRC launch of U.S. satellites, there is outright theft of technology. In particular, guidance technology currently used on the U.S. Army tactical missile system, currently used on the U.S. Navy stand-off land attack missile, extended range, the U.S. Navy F-14, the U.S. Air Force F-15, F-16 and F-117 fighter jets, has been stolen by the People's Republic of China. The stolen guidance technology has directed applicability to the PRC's intercontinental ballistic missiles, their intermediate and short-range ballistic missiles and their space lift rockets.

The Select Committee has uncovered instances of the PRC's use of this stolen guidance technology and that use—this is as much as we can say in an unclassified setting—enhances the PRC's military capabilities, jeopardizes U.S. national security interests and poses a direct threat to the United States, our friends and allies or our forces. This is an area where it has been determined that because of sensitive sources and methods we can go into it no further but some of you have had the opportunity to see this and those who have not, I hope will take the time to do so.

I yield to Mr. Dicks.

Mr. DICKS. In the late 1990's, the PRC stole or illegally obtained U.S. developmental and research technology that if taken to successful conclusion, could be used to attack U.S. satellites and submarines. In the late 1990's, the U.S. research and development work on electromagnetic weapons technology that once developed can be used for space-based weapons to attack satellites and missiles, I'd point out we gave up on this. We were not able to do this, so there is some question about whether the Chinese are, in fact, going to be able to do this.

In 1997, in the Lee case, U.S. developmental research concerning sensitive submarine detection techniques, some of you may know who serve on defense committees, there are a number of highly compartmented programs here. I think Mr. Lee was exposed to one of those.

ICBMs targeted on U.S. cities are based on U.S. technology illegally obtained by the PRC in the 1950's which illustrates the potential long-term effect of technology loss. We had an individual in the 1950's, a military officer, Mr. Xuesen, and associated members

for the design team for the U.S. Titan missile which illegally gave U.S. missile and missile-related technology to the PRC. This information formed the basis of the PRC's CSS-4 ICBM targeted on the United States and for the construction of the SS-4 silos.

So these things do have long-term consequences. These are the weapons that they are still relying on as we speak.

Mr. COX. Those weapons, the CSS-4s have been chiefly deployed during the 1990's, even though they are based on Titan technology that left the United States via a man that subsequently became General Xuesen in the 1950's. So the point Norm makes I want to underscore. There are very long-term consequences.

The PRC had only two ICBMs at the beginning of this decade. They have deployed the entirety of the rest of their force of approximately 20 during the 1990's and the majority of those ICBMs, as you know, are targeted on the United States. That Titan technology, that 1950's Muntz TV era technology is still perfectly useful to threaten all of our American cities from Los Angeles to Washington, D.C., all of which are within range of that missile. So we have to worry about 10 years, 15 years down the road what is going to become of this information that was just recently stolen, the most modern nuclear weapons technology on the planet. Will it find its way through the stream of commerce into the hands of regimes less stable than the People's Republic of China, or Third World regimes or terrorist states who might have interests far more hostile to the United States than the PRC's.

It's for that reason that we are so especially concerned about the details in this graphic, the People's Republic theft of design information on the United States most sophisticated nuclear warhead, the W-88. In addition to the W-88, we have lost design information on the W-70 and classified information on a number of U.S. warheads, collectively comprising the entire currently deployed U.S. nuclear arsenal as well as two weapons that we do not deploy, the neutron bomb which we have never deployed, and another which we have retired.

The Select Committee judges that this stolen information will find its way into the PRC, PLA weapons currently under development. The DF-31 intercontinental ballistic missile, which has been in development for over a decade, we expect will be tested this year and we estimate it will be deployed in 2002. On top of that missile—when, as and if deployed—we anticipate there will be a nuclear warhead incorporating elements of the stolen U.S. nuclear weapons designs.

Finally, PRC penetration of our national laboratories where this information originated undoubtedly continues to the present. We can say this with some confidence because the people who did this have not been apprehended. We're having a great deal of difficulty in finding suspects. We don't even have any real open cases with respect to the nuclear warheads other than the W-88. Inasmuch as that is true, even though we've done a lot, particularly in the last few months, Secretary Richardson has done a great deal to make sure you can't move information from classified areas of the computer to the unclassified so readily or at all, we would hope.

The people, who we have not identified, that undoubtedly work inside the labs because undoubtedly this was an inside job are pre-

sumptively still there. So we have to be concerned about the ongoing penetration of the national laboratories.

The People's Republic of China has stolen information on seven thermonuclear warheads. The W-70, in two different configurations, can be used as a strategic thermonuclear weapon or as an enhanced radiation weapon, a so-called neutron bomb. The PRC tested the neutron bomb—which it first stole in the Carter Administration in the late 1970's—in 1988 at the end of the Reagan Administration. They then came back for more and it was reported in 1996 that there was a further theft from the national laboratories of additional neutron bomb information.

The next chart will list the nuclear missiles to which these warheads are mated—the W-88 to the Trident D-5 submarine launch ballistic missile; the W-87 to our Peacekeeper ICBM; the W-78, a Minuteman III, Mark 12A; the W-76, Trident C-4; the W-70 to the Lance short-range missile; the W-62 is on the Minuteman III; and the W-56 on the no longer deployed Minuteman II.

The Select Committee judges that these thefts will find their way into the next generation of PLA weapons currently in development. The F-31, as I said, we expect will be tested this year.

Despite these thefts, despite the recency of some of these thefts, sophisticated nuclear weapons technology, security at our national nuclear weapons laboratories does not meet even minimal standards or did not at least at the time we wrote our report. Ed Curran who has been hired to be the new counterintelligence director at the Department of Energy testified before our Select Committee not only that counterintelligence at the DOE and at the national laboratories did not meet even minimal standards, his very words, that it would not meet even minimal standards until some time in the year 2000. That obviously is unacceptable.

In more recent times, I think Secretary Richardson and Ed Curran and the Congress have all agreed that we've got to accelerate that and efforts are now underway to do everything possible to accelerate that. One of the chief ends of our oversight was to ensure that acceleration took place. I'm confident that it's now underway.

Mr. DICKS. Since this makes up the principal part of the report, let me just talk a bit about the issues the Chairman has just reviewed these last few slides.

First of all, I agree, I think Ed Curran is a professional who had the experience in the CIA's Counterintelligence Office, and I think he can do the job that's necessary at these labs to get in place a first rate counterintelligence program, which hadn't existed since the 1970's, if ever. It's the culture out there I think that is the problem.

On the missiles, I think the two that are most important are the W-70 and the W-88 because they got design information on both of those and they tested both of those. The W-88 was tested in between 1992 and 1996, the W-70 in 1988. They've tested these missiles but they have not yet deployed anything.

Some people, for example, Johnny Foster with a great deal of experience in the damage assessment, question whether they're going to be able to take this technology they have stolen and actually be able to implement and deploy it. We agree that if they do, they're



going to use elements of what they stole if they go to a mobile and the DF-31 or in a submarine launch missile system.

Thus far, even though this is terrible and tragic, and never should have happened, thus far they have not been able to successfully deploy something new. We're just going to have to wait and see what happens there.

The next subject we want to get into is the high performance computers. The Chairman mentioned this in the initial discussion. Obviously high performance computers are very sensitive because if in fact they have received some of our nuclear codes, they could use the high performance computers to help with modeling, design work and other things that would help them improve the capability of their designs.

They have gone from a period, moving on to the next slide, where they literally had no high performance computers—they built one or two indigenously—to now having 600 of U.S. origin. The question is, the MTOPS levels, are they at such a level that they can really contribute, can you parallel process these computers to take them to a higher MTOPS level which may be needed to do the modeling and design work in perfecting one of these weapons.

One of the things is they signed the Comprehensive Test Ban Treaty in 1996 and there are a lot of people who believe you can't really do these things without thorough testing. They had some testing on the W-88 between 1992 and 1996 but whether they would really have the confidence to be able to deploy their version of it is a question mark.

We agreed, and we have three or four recommendations, that we ought to take another look at our policy on high performance computers and be more careful, make sure the Defense Department and the State Department have an ability to have the time necessary to thoroughly review these applications and licenses because there are serious defense implications.

On chart 21, you can see some of the areas where high performance computers can be used in the research and development of missiles, satellites, spacecraft, submarines, aircraft, military system components, command and control, communications, microwave and laser sensors. These are very important areas.

Mr. COX. As Representative Dicks just pointed out, while the PRC had essentially no HPCs on January 1, 1996, they have been able as a result of change in our policy to acquire, under license from the United States, over 600 since that time. That coincides precisely with their signing of the Comprehensive Test Ban Treaty and the completion of their testing.

At the same time the PRC decided it would sign the Comprehensive Test Ban Treaty, they had just completed their series of successful tests with the weapons they stole, the W-88. You know the details, if you read the classified version of this report, of how rapidly that occurred.

Our concern is this. With successful testing under their belt, and with current bans on physical testing, will they be able to use high performance computers as an end run to do so-called virtual testing. The United States does not like to rely on virtual testing for a number of reasons, including safety but a significant finding of the Rumsfeld Commission was that other countries don't have our

standards. In fact, some Third World countries might be willing to use as their first nuclear test, their first actual use of the weapon and find out whether it works.

The possibility that the PRC might be willing to rely on virtual testing in ways that we would not consider satisfactory is very real. Moreover, if the People's Republic of China were successful in acquiring our test code legacy, which has been much in the news since we reported on January 3, then the requirements for speed in high performance computers would be vastly reduced. If you possess no test data at all, then you'd need about 1 million MTOPS to get the job done with no test data at all.

If you have test data which you acquired from the Russians or from the United States, then those bets are off and you can get by with a much slower computer to do the same work for you. So we have warned in this report dated January 3 about the fact you could move information from the classified to the unclassified sections of the computers at the National Weapons Laboratory. In the spring of this year, our government discovered that's exactly what had happened. We are worried about the compromise of our codes. It's directly relevant to what we're talking about here.

Since January 1, 1996, the United States has actually sold HPCs, over 600, to the PRC, to PRC organizations involved in the list that Norm just read to you—missiles, satellites, spacecraft, submarines, aircraft, military systems components, command and control, etc.

The United States has no way to verify that the U.S. high performance computers aren't being used for those purposes at the destinations to which they've been licensed for sale. That has to concern us a great deal.

Of course when we sell these things under license, we intend that they not be used for these purposes, but living in the real world as we must, if we sell the computers to destinations engaged in these activities, and we have no way to verify what they are actually being used for, then shame on us.

Since 1998, we've had an end-use verification agreement with the People's Republic of China which is the right idea and the right start. It is toothless and it doesn't work. We criticize it directly in this report as being inadequate because, for starters, the PRC can elect whether or not to permit an inspection. Second, they can elect whether or not the United States can come and watch. Third, there are sharp time limits on when the inspections can be permitted and there are so many qualifications on whether there will be inspections that it is an utterly meaningless provision.

There has been in real life only one inspection since that agreement was reached in 1998. One of our significant recommendations is that as a term of trade, the United States insist that there be transparency, that we know what these computers are being used for, not as a sovereign commitment by the PRC but simply as a term of trade. I think it's a reasonable term of trade for us to say, if we're going to sell you these computers in light of what we know, we'd be happy to sell them to you but we want to make sure they're being used for peaceful, nonmilitary purposes.

I mentioned at the outset that we have changed our export control policies in a number of areas, particularly disbanding COCOM

in 1994. The Select Committee finds that the United States and international export control policies and practices have actually facilitated the PRC's efforts to obtain militarily useful technology.

Without a multilateral regime, we have essentially let down our guard and information we would like to protect is thus making its way to the PRC, not only from the United States but also from our allies. In addition, the expiration of the Export Administration Act in 1994 has left export controls in place only under executive order using the President's authorities under IEPA. As a result, even while the same rules are in place that used to be in place under the Export Administration Act, the penalties are essentially toothless. Under Secretary of Commerce Reinsch has testified before our committee that these penalties are not enough to get the attention of companies that we expect to be deterred.

Furthermore, in 1995, the United States reduced the time available for the national security agencies to look at pending export licenses. In light of the volume and complexity of licensing activities, that's exactly the wrong direction in which to move. We certainly need to make sure that we have well trained and adequately staffed resources at the Department of State and at the Department of Commerce so we do not burden business but also so that the national security and intelligence communities can get their licks in as well as the commerce people when we consider what to license for sale.

If Norm were back, this is his presentation at this point, he would make the point that I will make up on the slide right now. We found that our principal reliance, our chief reliance in our export regime on corporate self-policing is misplaced, not because U.S. companies are bad, to the contrary. U.S. companies spend a lot of time and effort trying to comply with our Washington regulations and to do the right thing time and time again. The problem is that we're placing an unnatural burden on their systems because of the inherent conflicts of interest. They are in a hurry, they're competing with others, not just in the United States but from around the world. They have a lot of pressures on them to make a sale, to please the customer, which in this case is a foreign country trying to suck technology out of them in many cases.

So rather than place that burden on them in addition to the financial burden, because they have a bottom line to worry about and security costs money, we recommend, for example, with respect to overseas satellite launches, the Defense Department take charge of this. Let the Defense Department be responsible for providing the security at the launch site, not the company and not the rent-a-cops. This way we would have direct national security responsibility rather than privatized corporate responsibility.

The same thing is true with respect to many of the changes made to our export licensing regime. It increasingly relies on self-policing and for the same conflict of interest reasons, it is self-conflicted and likely to fail.

There are several examples of the People's Republic of China's willingness to use commercial transactions as a means of acquiring technology that can then be diverted to military use. We have spent considerable amount of ink documenting two case studies, one the 1994 McDonnell-Douglas sale of machine tools to the Peo-

ple's Republic of China where for a period of years the PRC essentially lied to us about their intention all along to divert the machinery for use at the Nanching aircraft factory rather than the stated purpose which was to make commercial aircraft in the PRC.

The second case study was the decontrol of Garrett jet engines which the PRC wanted to acquire. These are military purpose jet engines and they wanted to acquire them for cruise missiles. The Commerce Department was prepared to approve this transfer of technology which was only thwarted when the Defense Department was alerted by the U.S. Embassy in Beijing to the intended diversion.

The first chapter in the first volume of our report deals with the way the technology acquisition policy is determined inside the governmental structure of the People's Republic of China and inside the Communist Party structure, the standing committee of the Politburo and in the Central Military Commission, which is a Communist Party organization.

In 1997, the PRC codified an earlier policy known as the 16-Character Policy and those 16 characters literally translated mean combine the military and the civil, combine peace and war, give priority to military products, let the civil support the military. The PRC seeks advanced U.S. military technology to achieve its long-term goals. Enunciated in Chapter 1 are policies of military technology acquisition that are very elaborate that explain what we're looking at is not a single instance unrelated to other single instances but rather part of an overall espionage and other forms of collection effort to acquire U.S. military technology. It relies upon a great many people.

The fact it is so manpower intensive poses special challenges to the FBI they report to us. The MSS, the chief spy agency in the People's Republic of China, does not always control and direct the agents that are involved in technology collection. There is a decentralized effort in which people associated with large State-owned corporations operating either directly or indirectly in the United States can also be tasked with the acquisition of information and which people in smaller organizations can be tasked with collection requirements. It is through this sort of decentralized effort that some of our nuclear secrets have been lost, it is suspected.

I do hope that Mr. Dicks can return to make this point which is one he feels very strongly about and that is the complication of our efforts by third party cooperation with the PRC's technology acquisition efforts, in particular, Russian cooperation. A signal purpose of our longstanding policies toward the People's Republic of China while there was a Soviet Union was to prevent military cooperation between the PRC and the Soviet Union. What we are now seeing is whereas there is no longer a Soviet Union, Russian cooperation with the PRC is greater than ever and we are very concerned about expanded military cooperation between the PRC and Russia.

While the PRC does not possess, for example, our sophisticated nuclear warheads, the W-88, they don't have such a thing, and that has been stolen from us by the PRC, Russian cooperation on a number of other fronts is greatly of concern. When you add the two together, it makes it very difficult for us to know precisely where the PLA's development program really is.

I would yield to Mr. Dicks. This is a topic I know you care greatly about.

Mr. DICKS. On this one, we have a great deal of concern about dual use technology and how that is handled. Of course here, one of the things we discovered in this is that Russia has given a tremendous amount of technology to China. In fact, many experts, when they compare the two, compare what the Chinese are getting from us and what they're getting from Russia, Russia gives them a great deal of very important equipment, pull up military systems and a lot of other things. We think that is one area we need to focus on in our dealings with the Russians.

Finally, the PRC has proliferated nuclear missile and space-related technologies to a number of countries as the Chairman mentioned and this has to be a concern for us that if we're lax in terms of allowing them to gain important U.S. technology, particularly the nuclear matters, you have to worry about proliferation, whether they are going to go on to other countries.

That basically wraps it up. We're willing to take any questions.

Senator COCHRAN. Let me thank you both for an outstanding presentation, very interesting and very disturbing, very thorough, obviously capturing the essence of the findings that your committee has made.

One thing I noticed in looking at a summary that I read just this morning was the tendency of the PRC to reengineer military equipment and hardware. You were talking about the sharing of information between Russia and the PRC and I understand they've developed and built an Exocet missile which they then sold to Iran. They copied the entire weapons system. That's what I read in this unclassified summary—also a Russian tank that they actually built themselves by reengineering it. Are there other examples in the unclassified report that you can tell us about that shows the expertise that the PRC has to do that kind of thing? Is it equal to anywhere else in the world?

Mr. DICKS. The accelerometer that we talked about earlier, they took off an airplane and they were able to use it in a whole variety of different ways—intermediate missiles, things that were proliferated—so they are very good at it.

The high performance computer, didn't they build one of their own based on one of ours?

Mr. COX. Yes. What we said about HPCs earlier is directly relevant here. The PRC went to great lengths to reverse engineer a high performance computer. To our knowledge, they built one or two. They've done this entirely with U.S. components. They have no indigenous capacity to build high performance computers but it cost them a lot of time, energy and effort to do this. They were so hell bent on trying to acquire the technology itself that they spent far more money than they would have to acquire a brand new computer on the market. By the time they were finished, such a thing was available that exceeded the speed of the one they were copying. The intent to acquire the technology and reverse engineer it is paramount.

Senator COCHRAN. There was another part of your report right at the outset that I found quite interesting. Your conclusion that some of our own companies illegally transferred—and that was

your word—information to the PRC when they were sharing know-how and technology with respect to launches of satellites. You even identify Loral and Hughes as two companies which did that.

Was your review of the facts so thorough that it enabled you to make a conclusion that they have violated the law? You said illegally. Did you make a judgment about whether they have committed criminal conduct?

Mr. COX. We were careful to distinguish between our finding and what the Justice Department has to do. It was one thing for us to say that the corporations deliberately acted without the required license, and that's what we said. They knew they had to get a license, they deliberately avoided doing so.

Whether or not the Justice Department can pluck from a corporation an individual and say you personally are responsible for criminal conduct is a different standard altogether. So we don't know what information they have inside the Justice Department. We conducted our own investigation. We knocked on that door at Justice repeatedly and asked for assistance on the national security side of what we were doing but they did not share information with us.

Furthermore, we were very careful not to grant immunity to particular witnesses, for example, as Wah-Lim at Loral, so that the Justice Department preserve its prosecution. They had asked us to forebear from granting immunity in several cases and we worked in the Justice Department in each case, granting immunity only where they agreed.

Senator COCHRAN. Was it your opinion based on your investigation that the Commerce Department was complicit in this arrangement between these two companies and the PRC in connection with sharing information?

Mr. COX. We took depositions and interviewed several people at the Commerce Department and I think you will see in the narrative with respect to the Commerce Department license that was granted by a licensing officer named Gene Christiansen that he told our committee he should never have granted that license, that Commerce didn't have the authority to do it. I find his behavior and the lack of any apparent supervision, which either means complicity of superiors or negligence to be utterly inexplicable.

Mr. DICKS. Going back to Loral and Hughes, they both did self-disclose. I think there had been something in the press and then they came in and said, yes, we should have gotten the license. It was our judgment looking at all the facts that they knew they should have gotten the license and didn't do it. In our system it's the courts that make these decisions but it was pretty clear to the other members that there was a violation of the law here.

Senator COCHRAN. I can remember when we had a hearing with representatives of both companies before our Subcommittee and explored how they were able to do this without getting a license from the State Department, whether things were on the munitions list and exempted or not subject to licensing and all of the rest. This brings back a lot of memories I have of questions we asked of those officials and of the Commerce Department on this subject. We've had nine hearings since 1997 on this subject and related subjects.

One thing I remember they disclosed was that one of the problems that caused a launch failure was the fairing or what some would call shroud. It depends on whether it's a space launch vehicle or an intercontinental ballistic missile. On one it's the fairing and on the other, it's the shroud. They kept pointing out to the Chinese, who were working with them on this, that they needed to repair the launch vehicle and they finally did and that's what saved them on future launches.

Mr. COX. There is no question. In fact, internal documents showed they were quite distraught after they had told the PRC how to fix the Long March rocket that they hadn't adopted all of their suggestions and another one crashed, so they doubled their efforts to make sure that rocket got fixed.

Senator COCHRAN. Without approval from our government?

Mr. COX. No. Any kind of defense service such as that, that would provide assistance to the PRC in making the rocket fly better would require a State Department license and it was very clear from the internal memoranda, correspondence testimony and other evidence that they knew if they went to the State Department such a license would be nearly impossible, if not impossible to obtain.

Senator COCHRAN. My final question before yielding to my colleagues is, my understanding from a statement President Clinton made yesterday is that he said, "We have strict controls on the transfer of sensitive commercial and military technology to China." Do you agree with President Clinton's statement?

Mr. COX. Can you read that to me again?

Senator COCHRAN. "We have strict controls on the transfer of sensitive commercial and military technology to China."

Mr. COX. I think that statement on the face of it is something I can agree with. The trouble is those controls don't work. We have, for example, this system of national discretion under the Wassenaar arrangement. If every country gets to do what it wants, that's not strict. It is a strict system possibly in name but it's got so many leaks in it that it doesn't work.

What we need to do is apply an empirical test, is this working. I think empirically, it is not. That is the reason unanimously our Select Committee recommended we move to a multilateral regime. We've simply got to do that or else we're not going to succeed in controlling things.

The United States acting alone probably is doing the right thing these days. My only point is it's not good enough.

Mr. DICKS. I think the question on dual use technology is very important. I think we need to make some judgments about those items that clearly have dual use capability, like high performance computers. One of the things that troubled us is we thought you've got to have solid end-use verification or things that are purchased for commercial purposes can get turned over and used for military purposes. We think we have some examples of that. That's one concern.

Not having the Export Administration Act in place, it expired in 1994 and we haven't reauthorized that, so the regime we have today has less penalty.

I think there are some things we could do to improve this and also to make sure that the Defense Department and the State De-

partment are given adequate time to evaluate some of these sensitive licenses. There's been a great rush to do these things faster and our view was take the lower dual-use items that are not nearly as sensitive and push them out, but the ones that have real serious military potential, they ought to be looked at longer.

Mr. COX. Representative Dicks reminds me of a point we made here earlier that caused me to add to the answer I just gave you. When it comes to high performance computers, knowing we have licensed for sale HPCs rating as high as 10,000 MTOPS, millions of theoretical operations per second, directly to the PRC, not even through Hong Kong, and knowing we have licensed high performance computers to end-use destinations in the PRC that are involved in all these military activities, and knowing as we do, in the Select Committee's judgment as we put it in here, about the application of U.S. high performance computers to nuclear weapons applications, I just think you have to take a completely different approach to that. That's why I agree so strongly with what Representative Dicks just said.

Senator COCHRAN. Thank you. Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman.

Thank you for that excellent report. Is it fair to say that both your Select Committee and the administration agree that: One, China has been targeting the lab since the late 1970's; two, that the Chinese have been concerned about the vulnerability of their nuclear forces; three, that the Chinese obtained nuclear weapons information for the United States which assisted their nuclear weapons modernization program?

Mr. COX. Yes, so far to all of those. I think we're in agreement.

Mr. DICKS. Yes.

Senator AKAKA. Then is there any disagreement over whether or not the Chinese could have developed nuclear weapons without classified information from the United States?

Mr. COX. I think once you get into that area you're into the realm of speculation because those are what ifs. I think what we can agree upon is that without this information, it wouldn't have been so fast. At a minimum, this accelerated their process and I think did so significantly. Whether or not ultimately they might have been able to do this on their own, I don't know.

We do have solid empirical evidence about how many nuclear tests it required of us to develop these weapons without anyone else's assistance. So when you take a look at the testing of the W-88, right off the bat with so few nuclear tests getting it right, that would have been impossible without the stolen information.

Mr. DICKS. Again, I just want to emphasize they have gotten design information on the W-70 and the W-88; they have their own version of both of those weapons and they have tested both, one in 1988, the other between 1992 and 1996, but they haven't taken that and then deployed something. So there is still a question in my own mind whether they can really get this done, whether they've got the talent, the machinery, and the ability to do this.

I agree with the Chairman, if they do, they're going to have used elements of those two weapon systems in this new weapon but they still have to be able to do it. There are people like John Foster, who is one of our finest experts in the CIA damage assessment, who



raises questions about this. So I think we're going to have to wait and see.

It's bad enough they got this information when they shouldn't have gotten it. That should never have happened but they still haven't been able to completely exploit it. They've learned a lot, it's brought their program up to a quality with ours in terms of design but they still have to deploy it.

Mr. COX. I should point out in that respect that Ambassador Lee on behalf of the People's Republic of China has said that it's a complete fabrication that they stole any of this and that we should not doubt the capacity of the PRC to develop this totally indigenously on their own.

If it's the case that they could do it all by themselves, then I think we have to ask whether or not if they stole it, they couldn't use what they stole. Somewhere you get hoisted on your own petard with that argument. I happen to have a great deal of respect for the PRC's capacities in this area but without question, they didn't have what they now have until they stole it. All we can tell you to a certainty is that this accelerated their program. What might have happened otherwise we can only speculate.

Senator AKAKA. I saw one of your slides and I want to ask whether the slide suggests that the Chinese obtained critical information on seven separate American nuclear warheads, but I've only seen reports about classified information on the W-88 and the neutron weapon. How did you reach your conclusion on other warhead systems?

Mr. COX. In fact, classified information on all of those weapons systems was acquired by the PRC according to sources that we cannot disclose in here but of course from the U.S. Government. The distinction that you're making is a correct one, however, between on the one hand, the W-88 and the W-70 and on the other hand, the other warheads listed because as Representative Dicks said in his opening presentation on this subject, the W-88 and W-70 were design information, the others were technical information, classified technical information but not design information, the latter category being more sophisticated than the technical information.

Mr. DICKS. The thing that's interesting here, the two that they have been able to do their version of are the two they got the design information on. On the rest of them, they got technical information but they haven't done anything with those.

Senator AKAKA. Your committee also concludes that the Chinese stole missile-related technology that improves their military capabilities. Is the Loral guidance system which the Chinese may have obtained the guidance system of preference for a missile?

Mr. COX. After Loral's Intelsat 708 launch on a Long March 3B failed, Loral assisted the People's Republic of China in correcting the problems with the Long March which in the case of the 3B were guidance problems. The guidance system that's used on that Long March 3B is a candidate but not in the words of your question—what was it?

Senator AKAKA. Whether it was the guidance system of preference?

Mr. COX. Preference. I don't think it is the guidance system of preference for future ballistic missiles but it is one capable of being

used for that purpose. So what we concluded is that the Loral assistance went directly to the reliability of the Long March rocket which is the workhorse military space lift rocket for the People's Liberation Army. It's what puts up their reconnaissance satellites and any space weapons they might use. The benefits for their ballistic missile program are indirect. Most significantly what they learned from Loral was diagnosis techniques but they've got a small, lightweight guidance system that is going to be of a general category useful on their future ballistic missiles. The system itself in the Long March 3B is not the preferred system is the direct answer to your question.

Mr. DICKS. But it could be used also for shorter range as I remember.

Mr. COX. That guidance system would be directly useful in short range missiles.

Mr. DICKS. Which if you're thinking about Taiwan and that problem, it could be very useful.

Senator AKAKA. Is it considered as having a high degree of reliability or was it a second, third or even fourth best alternative?

Mr. DICKS. Isn't it true they were pretty reliable anyway.

Mr. COX. First of all, the Long March 3B, you recall, was the maiden voyage and it crashed on its maiden voyage. So there was a great deal of concern. The guidance system on the Long March 3B is the guidance system on the Long March 3B. There is no question, it's the preferred system and it's the system in that rocket.

After the accident investigation, what Loral helped the PRC discover was what went wrong with that guidance system. It was the follow up frame in the guidance system which was the problem which they had not identified. In fact, they had ruled it out as a failure mode and so basically, Loral made it work. Now the reliability of the Long March is directly improved as a consequence of that.

Senator AKAKA. Do you know if the missile technology which the Chinese obtained from the satellite launches is at all usable for the modern mobile missile system which your report suggests the Chinese are working on?

Mr. COX. The DF-31?

Senator AKAKA. Yes.

Mr. COX. Is it at all useful?

Senator AKAKA. I'm asking if the missile technology which the Chinese obtained from the satellite launches is at all usable for the modern mobile missile system which your report suggests the Chinese are working?

Mr. COX. Yes. In addition to the guidance technology, which I think we just thoroughly discussed, the Hughes after-accident reviews focused on a different part of the rocket, the fairing, the covering for the satellite, which if it were used to cover warheads, would be called a shroud instead, same piece of the rocket but different technology if it's a ballistic missile as opposed to a rocket. Particularly if the new smaller warheads, which can be used for MIRVing, are in fact MIRVed, multiple warheads are put on top the same rocket, you'd need a shroud and if that configuration were used, then there would be direct help to the PLA for a ballistic missile as a result of that after-accident review.

Senator AKAKA. Thank you very much, Mr. Chairman.

Senator COCHRAN. It's about time for a vote, so we'll stand in recess.

[Recess.]

Senator COCHRAN. We still have one more vote that I'm going to have to go back over and make but I think in the meantime, I will proceed to ask a few more questions. I assume another Senator can return and continue the hearing, if you are able to stay. You've been very patient and we appreciate that very much.

I'm going to ask you for an assessment of what you think the impact is, and I know you may have already answered this. But I'm going to ask it again to be sure and give you a chance to tell us if your investigation showed what the impact of the PRC's acquisition of U.S. nuclear weapons design information has been? Do you have information on which to base a conclusion about the impact of the acquisition of U.S. nuclear weapons design technology and information?

Mr. COX. Yes. In fact, we cover that topic in our report, albeit one has to be careful and circumspect in doing so because this is getting us into the realm of future events. We can only weigh the probabilities and the nature of the concerns.

Our chief concern is with regional security in the short and medium term. The United States has forces in Japan, in Korea, in the region of the Taiwan Straits and those forces would be directly threatened by an increased offensive capability of the People's Liberation Army.

In the very long term, one can engage in conjecture about the relation of forces between the United States and the People's Republic of China but in the near term, it is the regional picture that we are most concerned with, the threats that are posed by the new DF-31 when it's deployed to Japan, to Korea, to India, to the Philippines, to the PRC's neighbors in the region. That essentially represents our conclusion on that point.

Mr. DICKS. I wanted to ask, Senator, did you say you wanted to know what they've done with the design information?

Senator COCHRAN. No, my question was what is your assessment of the impact of PRC's acquisition of U.S. nuclear weapons design information?

Mr. DICKS. I think the Chairman gives a good answer in that respect because if they in fact deploy. Again, as I pointed out, I'm not sure you were in the room, on the W-88 and the W-70, they've tested both of those but they haven't yet deployed them. So I have a question in my mind, and I think other experts do too, about whether they will be able to. If they do, then the things flow that the Chairman discussed and that's why we're worried about this because it would have a significant impact in allowing them to have mobile missiles or submarine-launched ballistic missiles which would change the balance of power in the region.

Again, I'd underline this, we still have to see. My leader who put me on this committee is from Missouri and he always says, show me. I think we have to see what they do here first before we can jump to the consequences of it.

Senator COCHRAN. My assumption is, from what you've told us today and my reading of the portions of the report that I've been

able to read, that one impact could be that they have a more advanced nuclear weapons capability.

Mr. COX. That is certainly true.

Senator COCHRAN. You mentioned the submarine launch capability. Also in the report there is the fact that the warheads they can fire now are going to be smaller. So the implications of all these things to me are very serious. That's my impression.

Mr. DICKS. Right, exactly.

Senator COCHRAN. It's quite serious and they have implications for our own policies with respect to missile defense. As we know, we just passed legislation in both Houses saying it's our policy to deploy as soon as technologically possible a National Missile Defense system, but I also think we need to accelerate our development and deployment of more effective theater missile defense systems.

Mr. DICKS. I think that's the number one priority. What bothers me the most is that we are having a very difficult time. Of course this drives PRC up the wall because they don't want to see Taiwan or Japan or Korea having an effective theater missile defense system.

My view is when you deploy forces, you've got to be able to protect them. As we remember, in the Gulf War, had Saddam had accurate SCUDs, those 500,000 troops sitting out there would have been in very vulnerable shape, a very vulnerable condition. In fact, we lost some already even though these things were completely inaccurate. So the theater missile defense issue, I think, is of paramount concern.

Mr. COX. Mr. Chairman, we infer doctrine from not just the public statements of the People's Republic of China because those could be misrepresentative of their true doctrine, but from their capabilities. If their ICBM force, as with their currently deployed CSS-4 force of about 20 ICBMs is silo-based, if it's liquid-fueled, if the warheads are mated with the missile, we can infer that's a deterrent, retaliatory force. We can believe then that's their doctrine if that's the hardware.

But when they change hardware, when they go to different weapons with different capabilities such as you mentioned—JL-2 submarine-launched ballistic missile where the warhead will be mated at all times with the missile itself where they'll have solid fueled missiles—then particularly in the region, we can be less confident that this is not an offensive capacity.

When you couple that with the resolute unwillingness of the Communist Party leadership, including Zhu Rongji in his recent visit after he left the United States, he went to Canada and said under no circumstances would they think about ruling out the use of nuclear weapons in Taiwan. So they are quite difficult to read on their doctrine in that case.

Furthermore, in the region, they have a first strike capability because even though their CSS-4s are lumbering and so on, their other weapons might not be our state of the art, as applied to other weaker states, they are superior.

So if the United States is looking at the situation in the region, we have to take heed when the PRC says we are absolutely opposed to missile defenses in the region. What that means is they

want to preserve their offensive capacity. It is not simply defensive and retaliatory on a regional basis.

Senator COCHRAN. In our transfers of missile technology, whether intentional, authorized or illegal, what worries me is that China has a record of proliferating and selling what they produce to other countries. There have been examples and they are cited in your report. You name countries and you name systems. I'm getting a little nervous because some of this is in an unclassified and some is in the classified version, so I'm very careful about how I ask the question.

Mr. COX. As you know, the list is longer, Senator, in the classified version.

Senator COCHRAN. My point is this. What do we do in terms of U.S. policy implications to try to deal with that? We've got the missile technology control regime.

Mr. DICKS. We've got to try to get that implemented and we need that on a multilateral basis. It takes presidential leadership, the Secretary of State, or the Secretary of Defense. In all conversations with the People's Republic of China, we've got to make this point.

The President would argue that we've gotten them to abide by some of these agreements and to stop proliferating in certain instances. There has been some progress made, but again, I think this is a major issue and it has to be consistent and we have to make a major priority.

Mr. COX. The PRC has not subscribed to the most recent version of the MTCR, so for starters, the U.S. policy should be designed to get them to commit to that.

Senator COCHRAN. Is there any evidence of a close relationship in terms of trading technology and technical assistance between China and North Korea and is there a connection between North Korea's advancement toward its multistage rocket capability in this relationship with the Communist regime in China?

Mr. COX. The answer to that question is yes, there is cooperation between the PRC and North Korea on its space launch program. In fact, we have a photograph of both the North Korean satellite and the PRC satellite on which it is apparently based in the report. Without PRC assistance, it is doubtful that North Korea could have launched that satellite atop a three-stage missile which remember, our intelligence told us before it happened was not going to happen and couldn't happen.

Senator COCHRAN. Congressman Dicks, you're a Ranking Member of the Select Committee on Intelligence in the House.

Mr. DICKS. I was, Mr. Chairman. I've worked myself out of two jobs. I had 8 years of that, which ended and now with the publication of this report at the end of this month, this committee is history. So I'm going to be back on the Appropriations Committee sitting with you in conference.

Senator COCHRAN. All right. We're looking forward to that.

You stated that Congress was not adequately informed about the thefts of nuclear weapons information, though the administration has claimed that Congress was adequately briefed. Have you gotten in trouble by saying that?

Mr. DICKS. I'll just tell you this. When I saw the chart we showed up here a few moments ago, when Notra Trulock presented

it, I got the message. We didn't get that chart in the Intelligence Committee that I can ever recall.

It's one thing to come up and brief the staff. It's another thing to come up and sit down with the Chairman and the Ranking Member and say we've got a problem. Frankly, I didn't feel and the Chairman of the Intelligence Committee, Porter Goss, didn't feel that we had really gotten the kind of briefing that we should have gotten until we were both sitting on the Select Committee with Chairman Cox.

There's letting people know something and also coming up and saying this is under investigation, we're doing this or that, but nobody came up and said, we've had a wholesale loss of the magnitude that we described here today. That is why I felt, in both the House and Senate, it's impossible that both the House and Senate Intelligence Committees would not have reacted had they gotten the full drift of this thing. That is why I feel they have to do a better job on these important issues.

The Ames case, I was on there on the Ames case and by God, everybody in the room knew what the implications of that were. All the members were there and it was explained. That's the way it should be done.

Mr. COX. Mr. Chairman, as the Chairman of the Select Committee, I sat as I'm sitting now before a microphone in a hearing room that was closed to the public and the press with Representative Dicks as my Ranking Member on one side and also the Ranking Member on the Intelligence Committee during the 105th Congress, and Porter Goss seated at the other side as the Vice Chairman of the Select Committee and the Chairman of the Intelligence Committee then and now and I saw the look on their faces, I listened to the expression of emotion when we heard these things and our hearts were in our mouths. It was the kind of thing that if you'd ever heard it before, you would never forget. Without question, these men had not heard this before.

Mr. DICKS. We knew there was a problem at the labs in terms of the capability. In fact, the Intelligence Committee authorized more money, and we appropriated it on the Appropriations Committee, in 1997, 1998 and 1999 to enhance the security at the labs because we had GAO reports, there were a number of things, but there wasn't a portrayal of this that we just had a completely incompetent system that had to be radically changed and the administration was coming up asking for help. That didn't really happen until Berger saw the briefing in the summer of 1997. Then they started moving on the PDD. They enhanced the money. They did that also in 1996.

I think our committee did a lot to drive this thing home because once I saw how bad this was, I went immediately to Richardson and told him, this is completely and utterly unacceptable. You've got to clean this up.

Senator COCHRAN. That was Bill Richardson, Secretary of Energy?

Mr. DICKS. The Secretary of Energy just when he came into office. To his credit, he was then considering recommendations from Ed Curran about what had to be done. These recommendations were implemented in November 1998. There were still people in

the Department of Energy who were resisting this, saying we don't need to do this, at least to the extent that Curran wanted to do it. I strongly supported Curran because I dealt with him when he was at the CIA.

So to Richardson's credit, he moved out and is still moving out and that's why I think we need to give him bipartisan support, we've got to give him the legislative help, we've got to give him the money, to get this job done. I think he and Curran together are committed. I can tell you this, our Select Committee had a lot to do in inspiring action.

Senator COCHRAN. Mr. Chairman, in 1998, the President certified to Congress that China, "The PRC is not providing any nuclear weapon-related assistance to foreign nuclear weapons programs. This is a requirement of one of the statutes on most-favored nation trade status." I think that was attached to the legislation as I recall.

Does your report contain any information that's contrary to that certification?

Mr. COX. We have two reports. One is classified and one is unclassified. Our unclassified report, to the best of my knowledge, does not include dates, so I can't give you a straight answer to that question.

Senator COCHRAN. There is concern that when we did have a loosening of the export restrictions on supercomputers, it was easier for the regime in China to exploit its nuclear gains. Maybe I should just ask that. Did the loosening of export restrictions on supercomputers by the administration make it easier for China to exploit its gains in the nuclear weapons area?

Mr. COX. First, rather obviously, it made it easier for the PRC to acquire high performance computers. They didn't have any until the first of the year 1996 and from that point forward, they have acquired over 600. Second, the Select Committee judges that U.S. high performance computers have been used in nuclear weapons applications. Third, we have stated in our unclassified report that U.S. high performance computers have been sent to destinations in the People's Republic of China that are involved in a variety of military-related work that we listed earlier during our testimony. So we have very serious and abiding concerns in that area.

Mr. DICKS. My staff reminds me that we may have a slightly different view on whether actually U.S. HPCs have been used. We don't sell them for that purpose; it's for commercial purposes only but the issue the Chairman is raising is have they taken one that was there for commercial purposes and it's wound up being somewhere else used in this regard, but there is a little difference of view between the two of us on that.

Senator COCHRAN. One reason I asked the question on the relaxation of export controls was that was done in 1996.

Mr. DICKS. Right.

Senator COCHRAN. And it was in 1995 that we understand the administration knew or should have known that the PRC was using the HPCs and other things they were buying for commercial use to improve their nuclear weapons program.

Mr. DICKS. I don't think we have any evidence on that that I know of.

Mr. COX. Mr. Chairman, can we ask your indulgence for just a moment because we're trying to sort out classified and unclassified information here.

[Recess.]

Mr. COX. Thank you, Mr. Chairman.

I think the side bar we just had with staff and the statement Mr. Dicks made about whether we're on all fours with what we're talking about here is because we're talking about two separate things.

Mr. DICKS. I concur with the Chairman that he's right about what transpired there.

Mr. COX. We have a statement in the report that says that the Select Committee judges that U.S. high performance computers have been used for nuclear weapons applications. That's a statement we're comfortable with.

Mr. DICKS. I don't think they could have used them very effectively at the level of MTOPS that they had in 1996.

Mr. COX. We can talk very freely about what that means. Whether or not it means, for example, that they can do three dimensional modeling of a W-88 while it's being detonated is something that we're not suggesting. The kind of computing power you need for that sort of thing is well beyond anything they've obtained from us, even though they've obtained relatively fast high performance computers.

The only way they could get into sophisticated nuclear weapons modeling at the levels that they have obtained is if they have also acquired test codes either from the United States or from Russia.

Senator COCHRAN. What becomes clear to me is that it was in 1995 that the administration came to understand the scope of the espionage that the PRC was engaged in in terms of what it had access to, what it was getting.

Mr. DICKS. I think in fairness, in 1995, we had the walk-in who came in with this document. It took a while to really try to reach a judgment about that. It wasn't until 1996 that the White House was briefed and this was in the context of a briefing that was about Chinese missile capability. This was like one or two lines in a 20-page briefing. It wasn't like what they received in 1997 when they had a briefing that was about this whole subject. It really was a grabber and I saw it and that's when the alarm bells went off down there.

I guess there is a difference of opinion just about how forcefully this was presented in 1996. Based on what I saw, this would look to anybody in a senior position like an investigation being conducted by law enforcement, FBI, about two different individuals who were under investigation for espionage in relationship to these kinds of events.

The 1997 briefing is when I think they started to move with the PDD and really trying to change things. I'm sure this will be disputed, Senator, for a long time and there will be all kinds of hearings up here. I know the Intelligence Committee is trying to have Mr. Berger up. I went down and took a look at these documents because I wanted to make a judgment for myself. So I think reasonable people can differ on when they really knew something.

They changed what they had given us originally because his Deputy said they in fact had briefed the President in the summer of



1997 and that set of the PDD 61 effort which was culminated and finished in February 1998.

Senator COCHRAN. I have to go vote and I'm going to turn the meeting over to Senator Akaka while I do that. I'll just close up this line of questioning and say this: It seems inconceivable that the knowledge gained in 1995 about the extent of the espionage and the information that was being gained by the PRC that in spite of that, it was in 1996 that the administration relaxes the export controls so that you do not have the same kind of stringent oversight from the Department of Defense and the Department of State on some of these items, that they could then be freely transferred. All you did was just ask the company to say they were selling for commercial purposes and leaving it up to them to check it out. That's why I think it's significant.

Mr. COX. That's why it's so significant that the Secretary of Commerce wasn't briefed, not in 1996, not in 1997, not in 1998, neither was the Secretary of State and you've heard those public complaints of late. Madeleine Albright has complained that nobody told her.

The State Department and the Commerce Department together have complete plenary responsibility for export licensing of militarily sensitive technology to the People's Republic of China and other countries. For these people not to know the dimensions of the problem we're talking about here and the hardware that we want to keep away from the PLA so they don't perfect what they've already stolen is a very bad thing indeed.

Senator COCHRAN. Senator Akaka.

Senator AKAKA [presiding]. Thank you, Mr. Chairman and thank you for being so patient here with us.

Your report states that unrestricted access to a satellite for as little as 2 hours could provide the PRC with valuable, non-public information about major satellite subsystems. My question is, could the Chinese obtain such information without tampering directly with the satellite, opening it for example?

Mr. COX. Yes. Non-intrusive means such as x-ray and so on are available so that as we state in our report, it would be possible if you had unfettered access to the satellite to leave it in such condition that no one could detect that intrusion had been made.

Mr. DICKS. It was our conclusion that there probably wasn't an opportunity even though the security was terrible, the guards did a poor job, the DTSA people there, we're not comfortable that there was ever a time when they could have actually done that. They could have done what the Chairman said, but actually get inside and some of us were told you had to really get into the satellite itself to get something you wouldn't be able to get through *Aviation Week* or all these other magazines that are out there.

Senator AKAKA. If they had been able to open it, would the companies have detected such access?

Mr. DICKS. I would hope so but again, there was some laxity here and the report properly says that you have to presume that if there was an opportunity, they would have taken it. Whether there was ever 2 hours when there wasn't somebody there, I think is doubtful.

Senator AKAKA. Is there any information that the Chinese did so?

Mr. DICKS. I don't think we ever had a conclusion that they did so but what we worried about was the laxity in security gave them an opportunity to do it that should not have been there, again a failure of the self-policing and a failure of the security system.

Mr. COX. Let me, if I might, read you the brief portions of our report that our joint investigative staff prepared in answer to this question. "If the PRC has only visual or photographic evidence"—in other words they just got from afar to look at the satellite briefly and that is a common violation of U.S. security guidelines—"then they could only obtain information that confirms known capabilities of the satellite that is available in the public domain." People said to us, that's useful information and they might be after it but you have to understand it's available in the public domain and it would confirm known capabilities of the satellite.

"If they had access for 2 hours, then they could gain valuable information that is not otherwise available in the public domain. The PRC could accomplish even exploitation that penetrated the interior of the satellite given 2 hours of time without leaving any traces. With this kind of exploitation, the PRC could gain new information about major satellite subsystems as well as the design and manufacture of each subsystem.

"Furthermore, unmonitored access to a U.S. satellite for more than 5 or 6 hours would be coals for Newcastle." It would be diminishing returns at that point; you wouldn't even need that much time but we asked the question if you had 24 hours, what could you learn and the answer is there's nothing you couldn't learn about the satellite in 24 hours.

The important thing is that even if you had just 2 hours, the PRC could accomplish even exploitation that penetrated the interior of the satellite without leaving any traces which I think is directly in response to your question.

Senator AKAKA. But we don't know whether they had 2 hours?

Mr. COX. We have several security infractions listed that show that satellites were unattended and that security sometimes for more than 24 hours was inadequate but the whole point of the lapses in security is that we were not there as percipient witnesses, so we cannot tell you that these things actually occurred. We have not stated in the report that they did but our conclusion is that it would be unusual if the PRC didn't exploit these opportunities. We have to leave it at that but we have stated very definitively that we have not documented the transfer of technology as a result of these lapses of security. We've only estimated what could have happened.

Senator AKAKA. Your report mentions an ongoing PRC intelligence collection effort at a number of national laboratories including Oak Ridge. Could you comment on their effort in Oak Ridge and perhaps other labs not directly associated with our nuclear weapons program?

Mr. COX. We don't have anything, Senator, unclassified about Oak Ridge.

Senator AKAKA. You state in your report that our laboratories almost certainly remain penetrated by the PRC today. Does this

mean that you concluded that even if we assume Wen Ho Lee is guilty of espionage that he would not be the only Chinese agent now in the labs?

Mr. COX. I think that's a very important part of what we're saying. This is not one person in one place. I think you can infer from the difficulty that we're having with that particular case, that is not the entire story.

Mr. DICKS. In the intelligence world you have to kind of here again, assume the worse and if they've had 20 years to recruit people, then you have to assume that you may not have everybody. That's a concern that if I were running counterintelligence, that's why you're going to do all these polygraphs out there, to see how many people you've got out there today who have significant counterintelligence problems.

I'm not on the Intelligence Committee anymore but I'll guarantee you there will be a list.

Mr. COX. I should add, perhaps unnecessarily, that we have been very, very cautious about the presentation of the ongoing case at Los Alamos. The name Wen Ho Lee which you have heard a great deal in the media for many weeks and months before the release of this report does not appear in our report. It doesn't appear even in the classified version of our report. We have been exceptionally careful about this. We refer to the case by its code name rather than referring to an individual.

I would hope given the gravity of these charges, somebody who gets convicted of such an offense is typically executed or given life in prison, that we would be careful in the public handling of these cases. I don't have any doubt that if our law enforcement gets the goods on one of these people that they will be unstinting in trying to penalize them at least with the kind of oversight we've been giving this case.

That doesn't mean that we need to have the Richard Jewel treatment for every suspect that we come up with and I would be very careful about that.

Senator AKAKA. If it were so, does that suggest that the DOE's Office of Counterintelligence may have erred or was not as thorough as it should have been and their analysis appears to have focused so closely on one individual?

Mr. COX. In fact, as I testified earlier, there are not even ongoing investigations into the thefts of the classified information on the other weapons because we don't have satisfactory leads to commence those investigations.

Mr. DICKS. These are very difficult cases. Counterintelligence cases are very difficult and there are problems with polygraphs too. So you have to work through those things, so it's going to take some time out there now that they are going to use polygraphs to get a full perspective of what's happened and where the problems are.

Mr. COX. Senator, I need to correct the statement I just made which was accurate as of the date of this report but staff informs me that subsequent to the completion of our report in January, the Department of Energy has initiated an internal investigation on the other weapons as well.

Senator AKAKA. Your report also states that the PRC has stolen a specific U.S. guidance technology used on current and past generations of U.S. weapons systems. Could you give us some idea when this theft occurred? For example, was it recently, in the early 1990's, in the late, middle or early 1980's?

Mr. COX. I think we're getting into a classified area with this one and we have to consult with staff to ask whether we can respond in open session.

Senator AKAKA. Your report mentions the importance of controls on computer exports. As you know, there have been and continue to be major advances in computer capability. This is a serious problem and one which we in the Congress will have to deal with this year. I'd like your considered opinion. If we are unable to get end-user verification or post-shipment verification for personal computer sales, should we refuse to sell computers capable of 7,000 MTOPS or 2,000 MTOPS that can be linked?

Mr. COX. Senator, I think your question was whether we should do this if we could not get end-use verification for the sales of personal computers. We haven't any interest in restricting personal computers in any way.

Mr. DICKS. I do think we've asked for a study to be done I think by the Department of Defense to look at parallel processing, look at all these issues and take a real substantive look at any potential problems here. Could you put enough of these smaller computers together to get to a high enough MTOPS level to give you a very effective military capability? That needs to be looked at.

I think the committees of Congress are going to have to go into this, bring in experts, do a lot of homework because we could have a red flag here saying we're concerned about this but I personally don't feel I have the expertise to advise you on what to do here. I think whoever the committee is that has jurisdiction has to take a very careful look at this.

Mr. COX. I should add that we currently have separate export licensing regimes for the PRC on one hand and Hong Kong on the other hand. It antedates the handover of Hong Kong on July 1, 1997 and has been kept in place without change. It makes no sense from a national security standpoint to sell faster computers to Hong Kong where there are People's Liberation Army troops garrisoned than you are willing to sell to the PRC itself.

So from a national security standpoint, living in the real world as we must, we have to recognize if we're selling these to Hong Kong, we're selling them to the People's Liberation Army and yet we are burdening our companies with all the paperwork, all the licensing and so on and turning down sales to the PRC as if we were getting some national security benefit in return.

Undoubtedly we're probably inconveniencing someone with a civilian use in the PRC but the one outfit that's getting what they need undoubtedly is the People's Liberation Army and the institutes that assist it in the manufacture and development of its weapons.

I think we need to be realistic about where our national security controls really are and we control computers at a much higher level for the PLA than most people think.

Senator AKAKA. Before I turn it back to the Chairman, in your report talking about computers, you note that the Chinese are purchasing millions of low end computers. More specifically you state that about 4.5 million desktops, portable personal computers, personal computers, servers and workstations in 1998 alone.

Do I understand your recommendations correctly that you are not advocating tightening export controls on this kind of equipment. Indeed you recommend that the levels should be streamlined.

Mr. COX. That's precisely correct. The dollar value of U.S. sales and the potential size of the market for personal computers dwarfs anything that we're getting out of the HPC market. So when one takes a look at the tiny amount of dollars that come to the United States from these HPC sales, it just isn't worth the national security tradeoff.

On the other hand, the expanding PC market is an attractive one that our exporters should be encouraged to tap.

Senator AKAKA. Thank you very much. Mr. Chairman.

Senator COCHRAN [presiding]. Thank you.

Mr. Chairman, in testimony before the committee, the Vice Chairman of Hughes Electronics testified that "Hughes does not possess knowledge of launch vehicle technology to improve their launch vehicles"—referring to China. This statement was made by Steven Dorfman, who is Vice Chairman of Hughes Electronics. I will repeat it, "Hughes does not possess knowledge of launch vehicle technology to improve China's launch vehicles." Do you agree with Mr. Dorfman's statement?

Mr. COX. Let me just read from the summary of our Chapter 5 on the Hughes matter. "In both cases"—this refers to both after-accident reviews after two Long March crashes—"Hughes disclosed information to the PRC that related to improving the Long March 2E fairing, a portion of the rocket that protects the payload during launch. Such information was outside the scope of the original license obtained from the State and Commerce Departments respectively with respect to the export and launch of the OPTUS B2 and APSTAR 2 satellites. Hughes claims that the 1993 OPTUS B2 failure analysis disclosures were cleared in advance by U.S. Government but neither Hughes nor the pertinent U.S. Government agencies retained records that would substantiate this claim fully. The lessons learned by the PRC from Hughes during the 1995 APSTAR 2 failure investigation are directly applicable to fairings on other rockets, including those used to launch PRC military satellites."

The point is made more elaborately in the chapter itself. We inquired, I believe through written interrogatories of all the agencies about whether the fairing is part of the rocket or not because the tissue of the argument that was used was that somehow this is part of the satellite. Every agency with remote responsibility conceivably to this issue, including the Commerce and State Departments, the CIA, everybody else that we asked wrote back to us unequivocally that the fairing is part of the rocket, and of course it is. It is essentially the nosecone.

Senator COCHRAN. Congressman Dicks, could I ask you, do you expect that information provided to China's space launch entities was shared with its missile programs?

Mr. DICKS. I wouldn't have any doubt about that.

Senator COCHRAN. My last question is one about policy with respect to the PRC. There's been a lot of debate about our policy of engagement. This administration has talked about the policy of engagement. Did you come to any conclusions about what our policy ought to be, whether we should continue the present Clinton Administration policy with respect to the People's Republic of China or whether we should change that policy?

Mr. COX. I have personal views on that point. I think most members do, but our report is directed to what happened. I think there are many policy inferences that one can draw from it.

We have made recommendations to change our export policy. We have made recommendations that I think indirectly suggest we ought to be very chary about our security relationship or any kind of perceived strategic partnership with the People's Republic of China, but inasmuch as we are chiefly concerned on our own counterintelligence and reforming that to protect against PRC espionage, inasmuch as we are concerned with the transfer of military technology which relates to export control, if you cabin that off and leave to that one side, all the rest of our bilateral relationship is still subject to the discretion of whoever is making policy.

While they are certainly related, one to another, there is nothing in our report that foreordains any particular China policy with respect to issues like trade, human rights or what have you.

Mr. DICKS. I personally think we should stay with our policy of engagement. In talking to most of the experts, I think my view is the mistakes here are our mistakes—the failure of the Defense Department to have good security at these launch sites, of the inadequacy of our counterintelligence programs. There are very few countries in the world who don't spy on the United States. So we have to be realistic about that.

Having said that, I like what Jim Baker said the other night, we need to have a very direct, honest, open relationship like we dealt with the Soviets before the Soviet empire broke up because I think China is too important a country to ignore.

My view is that we've got to clean up our own mess and yet I still think we should try to have a positive relationship with China because I think it's in our own interest to do that.

Senator COCHRAN. I appreciate very much your being here today, the patience, the cooperation with our Subcommittee, the fact that you came here to testify in the Senate on the same day you testified before a House committee on the subject of this report. I can't help but congratulate you again for the outstanding job you've done.

I think the other piece of evidence that is very compelling is the fact that the major dailies that have come to my attention today are all editorially enthusiastic about the quality of the work you have done and the importance of the work that you've done.

I'm going to, at this point, put in the record, the *New York Times*, *Washington Post*, *Washington Times*, *Wall Street Journal* editorials of today which are very complimentary and I think very pertinent and ought to be a part of the permanent record.<sup>1</sup>

<sup>1</sup>The articles referred to appears in the Appendix on pages 82–87.

Senator Lieberman.

Senator LIEBERMAN. Thanks, Mr. Chairman.

Perhaps it's some kind of trifecta, on the same day you have received thunderous praise from both the Senate and the editorial writers. Congratulations and be careful tomorrow.

Mr. COX. The way I count that, the Senate and the editorial writers, it's not a trifecta.

Senator LIEBERMAN. Well, count the editorial writers twice. I was searching for the third.

Thanks very much. I'm sorry that the schedule has taken us in and out. I asked my staff if anyone asked you this question and to the extent that you're able to talk about it now, I'm intrigued with what you found about the standard method of operating that the PRC has with regard to espionage. We focused on, for instance, the case of Wen Ho Lee and suspicions around him, an employee of one of the labs. Of course you've documented for us the stunning array of sophisticated programs that the PRC has successfully penetrated and received information from but what's the standard method? Is it typically to compromise a U.S. employee or how does it work?

Mr. COX. Senator, as you alluded to, the PRC has explicitly adopted programs—the 863 Program, the Super 863 Program, the 16 Character Policy which is outlined in the first chapter, first volume of our report—that enlisted a remarkably large number of scientists and other people in the collection and assimilation of foreign, chiefly United States, technology for military as well as civil purposes.

The acquisition of that technology is accomplished through a number of means, only one of which is what we would consider to be standard spy agency espionage, the chief spy agencies in the PRC being the MSS, Ministry of State Security and the MID, the Military Intelligence Division of the People's Liberation Army.

In many cases, there will be MSS involvement but not a direct MSS agent involved in the collection of the information and a decentralized collection effort is what is uniquely characteristic of the PRC's collection methodology. That means some of the large state-owned corporations that operate either directly or indirectly in the United States might be involved through their own personnel, doing their own collection. It means they might not be specifically directed or they might be specifically directed. We have seen instances in which decisions and reporting back occurs at very high levels of the PRC.

Senator LIEBERMAN. Even though they are decentralized, is there some national policy that encourages them on or is this sort of entrepreneurial, that a given PRC laboratory or company will just go out and try to grab what they can from us because we're the most sophisticated?

Mr. COX. Both. In fact the use of entrepreneurial collection is actually part of the overall policy. It's a labor intensive, manpower intensive operation that diminishes the amount that each person is required to collect and then aggregates it and puts it together in a so-called mosaic technique.

Mr. DICKS. The scientific exchanges too have been very much used, foreign visitors for targeting purposes, inviting people back to

the homeland and then having dinners and alcohol, some very kind of standard techniques, but very targeted.

Senator LIEBERMAN. It's hard to keep up with that kind of operation.

Mr. DICKS. From our perspective, this is so unlike the way the Soviets operated.

Senator LIEBERMAN. Which was much more centralized.

Mr. DICKS. More centralized and there were various techniques that they would use, a lot of money involved and this is a different strategy. It's much more difficult because you have so many more people involved to really monitor effectively with good counterintelligence. As you know, our focus in the intelligence world was the Soviet Union for so long and so much of our resources were aimed at them, that other areas of the world just never quite got the attention.

I think what we're now finding out is we should have been paying a little more attention to the People's Republic of China, particularly as they were dealing with our labs. That's what is very stunning here.

Senator LIEBERMAN. Was the PRC carrying on similar espionage activities in other developed nations or were we uniquely targeted? After all, European nations, Japan, for instance, all have sophisticated technology sectors.

Mr. COX. I need to give you two answers to that. The first is that we have reported that the PRC made an election to pursue U.S. designs and U.S. models and of course sophisticated weapons like the W-88. There isn't anything like the W-88, it's unique and it's the most sophisticated weapon in the world, and isn't available anywhere else. If that's the model you're pursuing, you come to the United States to get it. We're quite confident they have selected the U.S. model rather than, for example, the Russian model.

On the other hand, our Select Committee hardly exhausted the topic in our investigation. We had a time limit investigation and we stuck to our knitting. We looked at the transfer of U.S. technology to the PRC and if we were authoritatively to attempt to say today we can tell you they did or didn't do this with France, Germany or what have you, we would be way out of bounds.

Mr. DICKS. One thing we did see though was the Russians were giving them tremendous amounts of very advanced technology, military systems, etc. Some people at the Pentagon compared, leaving the nuclear stuff out, that dramatically more important technology is coming from Russia, which is another foreign policy challenge for us. How do we get with the Russians on this subject to try to do less of that?

Mr. COX. That, of course, is not espionage and what makes it even more troubling is that it seems to be consensual on the part of the Russians and yet I've talked to many people in the Russian government and legislators in Russia who find this profoundly contrary to the Russian national interest.

Mr. DICKS. Sure.

Mr. COX. And so the fact that it's going on one must assume is a function of the exchange of a lot of money and probably a lot of people taking it on the side. Be that as it may, it's happening.



Senator LIEBERMAN. Let me ask you one or two quick questions about Hughes and Loral. You've alleged that they knowingly did not obtain the licenses they should have had in the cases you've cited.

This may seem like a question with an obvious answer and perhaps you've answered it, but to what extent were you able to reach conclusions about what their motivations were? In other words, one might not seek a license because you think you're not going to get it or you're too lazy to go through the process, maybe you think you would get it but it's going to take too much time so you want to go ahead with getting your satellite launched, etc.

What kind of conclusions did each of you reach about the motivations here?

Mr. COX. We actually in the very well documented chapters on Hughes and Loral have laid it out there for the world to see. You can take a look at the motivations in the words of the employees of these corporations themselves. They pretty much put on the record why it is they did what they did. They were concerned about their business relationships with the PRC, they were concerned about getting space insurance, and we have a significant amount devoted to that.

Senator LIEBERMAN. Tell me what you mean about their business relationship with the PRC? They thought if they applied for the license, it would take too long?

Mr. COX. The PRC is not only a launch services provider in this case, they are also a customer for the satellites. The satellite companies are trying to sell their wares to the PRC. There are some memoranda and some back and forth correspondence and conversations that make it very clear that future deals were connected to the conduct of these launch investigations. In fact, in one ironic way, Hughes, trying to fix the Long March rocket so that it worked to satisfied the space insurers, actually brought them into potential conflict in a business way with China Great Wall Industry which didn't want to be told, at least nominally—maybe this was a very skillful negotiating tactic on their part to make sure they got the Hughes help—but according to at least the face of the memoranda, they didn't want to be told how to fix their rockets and Hughes wanted to tell them how to fix their rockets because they didn't want them to crash anymore.

Senator LIEBERMAN. Do you have anything you want to add, Congressman?

Mr. DICKS. No, I basically concur with that. This was a very sober judgment. These are two outstanding companies that I have a high regard for but it was our opinion, looking at all the evidence, that they knew they should have gotten these licenses and just didn't do it. I think it was because they wanted to engage the Chinese and knew that they would be turned down.

Senator LIEBERMAN. Again, perhaps a question with an obvious answer but they knew they should have received the licenses; do you think it's reasonable to conclude or do you conclude that they also knew, notwithstanding that legal obligation, that going ahead without the license would compromise our national security in some way?

Mr. COX. There are some memoranda that indicate not only did the corporate people know that if they asked the State Department for a license, they would be turned down, but they knew and put it on a piece of paper that they knew the reason they would be turned down was because of the possibility of aiding the PRC's ballistic missile program.

Senator LIEBERMAN. Thanks again, if I can once more praise you. Here's the trifecta. If I caught the TV correctly last night, President Clinton also praised you, so you have the *Washington Post*, the editorial writers, the Senate and the President.

Mr. COX. The Holy Trinity so to speak.

Senator LIEBERMAN. Thanks a lot.

Mr. DICKS. If we could just get the House leadership.

[Laughter.]

Senator COCHRAN. Senator Thompson.

Senator THOMPSON. Thank you very much.

How long, if you know, have the Russians been supplying nuclear capabilities to China?

Mr. COX. Actually, we have been rather circumspect in our statement about that specific. In our unclassified report, we have talked about PRC-Russian cooperation, we have talked about our concerns that this is going on in the military area, and we have to leave it at that.

Senator THOMPSON. All right. We do know that Russia is also proliferating to some of these Third World countries, so we have the Russians supplying the Chinese, the Chinese supplying Third World countries, Russia supplying Third World countries. We have a real pretty picture developing around the world.

I don't know which one of you made the comment to begin with, and maybe it was Senator Lieberman, about the theater threat. I've heard it said a hundred times that we have so many nuclear weapons and they have just a handful, that we have thousands, which is certainly relevant but totally misses the point.

If they pose a threat to our allies in the region, it's almost as much as if they posed a direct threat to us.

Mr. COX. We have troops in the region for support.

Senator THOMPSON. Of course. We have people in the region there and a direct attack on our allies would be almost like a direct attack on us and would involve us probably just as readily. Milosevic doesn't have any nuclear capability either as far as I know but he sure is affecting this Nation's policy.

In order to determine what foreign nations are doing and to protect our national security, it seems to me that we at least need to know what our country and our government is doing. I was concerned to read in your appendix, which I find one of the more interesting sections of what you've done here, the Justice Department objections.

Apparently the Justice Department was the only U.S. Governmental entity that you dealt with that rendered objections and failed to cooperate fully. Can you discuss that? It's on page 212 of the third volume. Can you discuss that even to the point, as I understand it, that they discouraged you from talking to some of the same witnesses.

Obviously you have 6(e) grand jury material issues that are relevant and you have agencies that apparently don't want to cooperate because the Justice Department has encouraged them not to. The implication I get is that they don't want to give you copies of what the Justice Department has asked of them, they don't want to give you copies of what they've given to the Justice Department, although clearly it has no 6(e) implications.

Taking the cake for me was this business of discouraging you, apparently, from talking to witnesses they had talked to because of the old ongoing criminal investigation exception that we all know and love so well. It is used at the drop of a hat in order to keep Congress from finding out what they're doing.

Who were you dealing with, what were the instances and to what extent did that pose a difficulty for you in trying to carry out your job?

Mr. COX. We dealt directly with the Attorney General on this as well as the senior leadership at the Department of Justice. Our joint staff, who were conducting this investigation, not the Democratic or Republican staff but the joint staff under the leadership of Rick Cinnquegrana, who has worked both at the Department of Justice as an advisor to the Attorney General and at the CIA where presently he is the Deputy Inspector General, and Dan Silver, who in the Carter Administration was the General Counsel at the CIA and the General Counsel of the NSA, were very concerned that the Justice Department was essentially getting in the way of our investigation.

We were created as a Select Committee with a time limit. We had less than 6 months to do the entire investigation and I'm sure you're familiar with the time limit imposed.

Senator THOMPSON. This committee is familiar with the time limit.

Mr. COX. We were created by the unanimous or nearly unanimous vote of the House of Representatives to do a serious national security look at some very specific questions. These were serious questions and it turned out they were more serious than even we thought at the time but we took the job very seriously.

So we were very concerned that the Department of Justice, for the first part of our investigation, took the view that they could interpose themselves between us and all the other parts of the Executive Branch. If we sent a document request to an executive department, they would say the executive department couldn't respond to the committee's request even if it were a subpoena because they needed first to get in the middle of it and look at it and see whether any of it was the same as had gone to the grand jury. That's absurd.

Senator THOMPSON. I find that outrageous.

Mr. COX. We stopped that, we worked it out with them and they stopped doing that.

Second, and of greater concern, is that if you're trying to solve a problem for the country and you're trying to look at this as a national security matter, then you want to get to the bottom of these things in a hurry, you don't want to drag it out.

Senator THOMPSON. Especially if it's an ongoing problem.

Mr. COX. The Justice Department had been out and done a lot of this work and talked to witnesses and if only they could have told us, for example, what might be an investigative blind alley, they could have saved us a lot of time, don't look there, there's nothing there. They took the view that they couldn't do that.

I suggested, and this is why I met with the Attorney General, and why we met on several occasions with the senior leadership of the Department of Justice and the U.S. Attorney here in the District of Columbia, we wanted to go into court and ask the judge, go in together, the Congress and the Justice Department, for a ruling under 6(e) that we could look at some of that material.

We could obviously convince the court we were to keep it secret, we had a scif, we had a compartment that was tighter than the grand jury compartment dealing with classified material.

Senator THOMPSON. You were being given the most sensitive secrets this country has from other departments?

Mr. COX. That's correct.

Senator THOMPSON. So you would assume that perhaps this would not be an unreasonable request.

Mr. COX. I took the view that if we went in together, the judge probably would be sympathetic but that if a judge turned us down, I would be satisfied with that. I wanted to do it all within the law but we didn't have the opportunity to make that cooperative request because the Justice Department said no.

Senator THOMPSON. They would not agree to go with you to the judge to ask for access to 6(e) material?

Mr. COX. No, but we had the opportunity or I should say the authority under the resolution that created us to go into court on our own behalf but litigating against our own Justice Department would have taken us a lot longer than the 6 months we had, so we decided to give up on that.

An analogous problem, which is of greater concern because that was a problem for our investigation but this is a problem for the country, sort of permanently on an ongoing basis, is that the Justice Department likewise guards that turf just as jealously vis-a-vis the rest of the Executive Branch.

I worked in the Executive Branch, I worked in the White House and I know how reticent the Executive Branch is to share any material with the Hill but sharing it within the Executive Branch is just absolutely essential if it's national security information that should go to the CIA Director, at least it should go to the FBI Director, it should go, I think, to the Secretary of State and to the Secretary of Commerce if they are licensing foreign technology and there is this information that they don't know about.

Looking at these things exclusively as law enforcement matters and not recognizing the big, enormous national security component does great injury to this country because if we know anything about law enforcement, it takes forever.

Senator THOMPSON. Let me make sure I understand. How were they interposing themselves with all these other agencies?

Mr. COX. They instructed them not to respond.

Senator THOMPSON. They instructed agencies of the U.S. Government—give me an example of an agency.

Mr. COX. We would send a request to the Department of Commerce and then the Department of Commerce would be told not to respond to us until the Justice Department looked through what they were going to provide.

Mr. DICKS. But we did finally get that worked out.

Mr. COX. We got that fixed but that was their position. What it states in here, and this was written by the joint staff who felt very strongly about this, it slowed down our investigation.

Mr. DICKS. Frankly, I think we got very good cooperation overall and the Justice Department was the one area where we had some difficulty.

Mr. COX. That's correct.

Senator THOMPSON. This is very important because it comes up time and time again and it's becoming more and more focused now. We ran into it in our campaign finance investigation, where they said because of an ongoing criminal investigation, they can't tell us about that. The law clearly recognizes a legitimate interest of the Executive Branch to prosecute cases. We recognize that interest. The law also recognizes a congressional right, duty and responsibility to inform the public and to legislate, especially in this particular area. Clearly under the law, it is Congress that has to do the balancing.

I remember Sam Ervin and Archibald Cox got into this disagreement in the very beginning. Cox was saying don't disrupt our investigation. Uncle Sam was talking about the peoples' right to know and clearly the Congress has a right to hopefully not be irresponsible but to do that balancing and weigh those interests in order to inform the people about how their government is operating.

Now, for the first time, we're seeing it happen with regard to the most important, sensitive, dangerous matter posed to our country that is ongoing. So we're seeing it now being used where the actual national security is involved. You have the Justice Department not just saying we don't want to tell you all these things because it's an ongoing criminal investigation, which is outrageous enough under these circumstances, but also interposing themselves, which I did not realize, I don't think I even ran into that.

You have a section in here about John Huang and you point out all of his activities, all of the things we went into when we were here and all of his access to classified information, all the calls to Lippo while he was on the public payroll, all the trips across the way, Lippo being partners with an outfit that in turn was hooked with an outfit that did some of the Hughes launches or getting ready to.

I take it you didn't know anything about what was going on between Justice and John Huang, is that correct?

Mr. COX. That's exactly right.

Senator THOMPSON. Now, the day that your report is released, they release a statement announcing that they have cut a deal with John Huang for probation and that he is now going to have to suffer the stigma of having pled guilty to an offense that happened back before he even came to Washington when our record is replete with his helping organized the Hsi Lai Temple event and lots of other things. So this is apparently the kind of interest the

Justice Department was protecting. They didn't want you to mess up the John Huang probation deal. That's the level of the kind of stuff they are protecting. Charlie Trie, same thing as far as that's concerned. I think that is just one example. I cannot understand that but I assure you that we will attempt to understand that in our Committee and working with you.

You also point out in the Appendix the fact that you had a time limit, the fact that with regard to privileges that are raised, all the things that posed a problem, and here you are going on the line for your work product at the end of the day and being stymied.

Mr. COX. Senator, I should tell you we had negotiations with the attorney for John Huang and he offered us the same deal that apparently he just got from the Justice Department. We turned it down. We could have had his testimony in return for a grant of immunity along those lines and we didn't extend it so that we could preserve the Justice Department right to prosecute.

Senator THOMPSON. We could have granted him immunity too as far as that's concerned. I guess it was over the Justice Department's objections of course. Did you talk to Justice about the possibility of doing that?

Mr. COX. No, we did not, so they did not object because we didn't ask them.

Senator THOMPSON. See, that's the fix we're all in. None of us want to mess up an important prosecution, especially if there is a possibility that the person is going to cooperate. In this prosecution deal, he says he's supposed to cooperate. Well that's as good as the person enforcing the agreement from the government's side. So that is the dilemma that we have and we're not getting any cooperation from the Justice Department as to what the real deal is. So out of an abundance of caution, we say we don't want to mess up any important prosecution that in this case resulted in a probation deal and some public service for a 1992 violation and you deprived yourself, as we deprived ourselves in this Committee, of the possibility of gaining some information that might have helped you with regard to a matter of national security. We've got to do, as a government, a lot better than that.

I'll ask one more question in one more similarly related area. We have had hearings and Senator Cochran certainly has taken the lead in this on the transfer of responsibility, regarding munitions list matters, I believe in 1996, from the State Department to the Commerce Department and there has been a lot of discussion about that. We're supposed to have a mechanism in place in which concerned departments can appeal. I think I might have been out of the room and you expressed some concern about the efficacy of that system.

I noticed in your report that you had a couple of people—you didn't name their names—from DTSA who expressed grave concerns that, essentially, that review process to them was a sham. I look and see that apparently you were trying to get their testimony and others at DTSA which was, to me, the heart of the process in which everyone is supposed to blow the whistle if we're about to give technology we shouldn't give and the Department of Defense would not cooperate with you on that. Can you explain what happened there?

Mr. COX. Our joint staff, our majority staff and our minority staff were all unhappy with that result. As a result, we wrote it up in the appendix which you discovered.

We had live testimony that suggested there were serious problems at DTSA, that it was a mismanaged agency. This is the Defense Technology Security Administration within the Department of Defense, that there were a lot of unhappy people and so on.

There was some question among the members whether this was representative of what really was going on at DTSA or whether these were a couple of disgruntled, unrepresentative people. So one of our members suggested that we get a chance to talk to others at DTSA and it was then given to us that would be disruptive. So we offered to distribute a questionnaire and just have them send back some answers confidentially to us and that I believe was rejected.

So we were just told basically, again, we're a time-limited committee and we had some substantial powers but our option is to start to hold people in contempt and ask the U.S. Attorney to initiate is not realistic, so basically they closed that door for us very effectively and we didn't get a chance to do oversight in that area. We can't report anything more to you than we've said in this unclassified version.

Senator THOMPSON. Thank you very much. I think this just gives some insight. Of all the important things you were able to do, there are still in my mind some very important things you were kept from doing and we need to figure out how to do a better job of that.

Finally, absent that problem, were you able to make an assessment with regard to how the system, the export control system is operating in terms of giving the defense side of things, for example, time enough to register their objections and appeal? My recollection is that these are very short time periods for appeal and that sort of thing. Maybe there had never been an appeal that made it all the way to the top, even though you had all this disgruntlement at the bottom. Were you able to make much of an assessment about that without DTSA's cooperation or Defense's cooperation?

Mr. COX. We concluded after looking at a lot of things, of which that would only be one part, that it is important, particularly on the most sensitive military technology that you have the considered views of the national security community and the intelligence community and we have recommended that occur.

Under the current situation as it has been reconfigured of late, as you know, the Commerce Department is essentially in the driver seat and has a disproportionate weight in their views.

Mr. DICKS. We were concerned about making certain there wasn't real pressure put on them to do a cursory job of reviewing these licenses. We thought some of the time lines were getting to be a little bit questionable and that both Defense and State on these very high level, highly important, dual use technologies, their views had to be brought into this.

Of course you know the House initiated the return of the satellite launches to the State Department. So I think this is a very sensitive area and one that we have to be very careful about.

Senator THOMPSON. Thank you very much.

Senator COCHRAN. Senator Levin.

Senator LEVIN. In fact, that was accomplished last year, is that correct?

Mr. DICKS. It was.

Senator LEVIN. One of the issues that Chairman Thompson has raised is the information we don't get that we ask for and the various reasons given for not getting that information and that is an important issue. There is another issue about information we do get and do nothing about. I'm intrigued by the list of General Accounting Office reports on DOE security issues that have just flowed into this Congress for 2 decades.

Mr. DICKS. We had a lot of letters read today that Chairman Dingell had sent to various Secretaries of Energy throughout the 1980's on this very subject which I think the reason this was read was to remind people that this has gone on for 20 years and somebody had better at least now pay attention. We do have their attention now.

Senator LEVIN. One issue has been going on for 20 years, but my point is a little different. For 20 years, Congress has been informed by the GAO that there have been problems, 20 years. You go back starting in 1980, August, with a GAO report, "Safeguards and security at DOE's weapon facilities are still not adequate." They are still not adequate in August 1998.<sup>1</sup>

Mr. DICKS. That's because they had a major failure late in the 1970's with the lands.

Senator LEVIN. Then next, this is 1986: "Nuclear proliferation: DOE has insufficient control over nuclear technology exports." One of the lines is DOE is releasing technology without security.

Then in March 1987, "Nuclear Security: DOE's reinvestigation of employees has not been timely." Here's a quotation: "In summary, we found that DOE Headquarters and some field offices have been unable to meet DOE goals to reinvestigate security clearances. DOE offices have almost 76,000 employees who have not been investigated within the last 5 years." This goes on and on and on for 20 years we get GAO reports.

Has there been an assessment as to where Congress maybe fell down on the job here, too, in terms of forcing corrections of issues. Is that part of your review?

Mr. COX. Of course the General Accounting Office is the investigative arm of the Congress, so Congress can at least take credit for consistently highlighting these problems.

Senator LEVIN. But don't we have an obligation to do more than highlight problems? Don't we have an obligation to force changes in problems if they keep going on?

Mr. COX. I think what we have described in our report is that there have been repeated, apparent efforts made so that there would be a response to this Congress banging on the door. At our Hershey retreat, I had a chance to learn from John Dingell his long interest in this issue.

I worked in the White House when John Dingell was doing oversight and I think you need to infer something from the fact that even John Dingell oversight couldn't fix this problem, that it's a very resistant strain.

<sup>1</sup>The list Senator Levin refers to appears in the Appendix on page 88.



We can infer properly, correctly that throughout several administrations, from the birth of the Department of Energy in the late 1970's to the present day, DOE has resisted efforts to fix an obvious and identified problem until something horrible happened. It's a little bit like driving down the freeway with one finger on the wheel, a can of beer, no seatbelt and as long as nothing happens, people can warn you that is dangerous but unless you hit a pylon at 60 miles a hour, you don't quite get the message. Now that's happened and we all agree that it's horrible that we didn't do something.

I think in addition to inferring that Democrats and Republicans were negligent in responding to obvious warning signals, we need to infer something else, that maybe there is something endemic about the institution we set up, the Department of Energy, these problems being coextensive with the entire life of DOE.

The Atomic Energy Commission had responsibility for these things prior to the creation of DOE. That was sort of a grab bag Cabinet agency into which a lot of things were stuffed. It's conflicting missions I think are part of the reason we have had a lack of attention on something this important because DOE is not just a national security agency.

Mr. DICKS. I would answer your question this way. I think yes, Congress does have a responsibility here. I think the Armed Services Committee in the House and the Senate, the Intelligence Committee, the Operations Committee, the Commerce Committee, you can name them and we've all had responsibilities here. On the Intelligence Committee, we increased the funding for 3 years but we didn't get the job done.

I think it's not only a failure of the Department of Energy, it's a failure up here too. I take part of the blame myself.

Senator LEVIN. Congressman Dicks, yesterday you made reference to the report as being cast in the worst case fashion. Could you tell us what you meant by that?

Mr. DICKS. What I meant to say is that we took these conclusions, we took facts and we argued about the facts and then we drew conclusions. Some of these conclusions assume the worse possible thing is going to happen. Therefore, people have expressed some concerns about this. I think it was the creativity of the staff and the principal author, which is the Chairman, that we were able to lay all these things out.

I would argue that not all these things are necessarily going to happen. Again I mentioned that when you were not here, the fact that we still don't know whether they are going to deploy the weapons they have stolen. We think they probably will but they haven't done it yet.

So in reading this report, you have to look at this thing carefully and then you have to make a judgment. We don't know, as the Chairman says, the future, so we make some predictions, we make some judgments that only the future will tell us. I think it's important in a report like this to have balance. Our side tried to add balance on a few issues to make certain that the American people were not going to be completely frightened by this thing—as the Senator has said about us having overwhelming military superiority over the Chinese—but the issue is, as the Chairman points

out, and I agree, this is the concern about them exploiting the secrets that they have stolen is in the regional context and not as much against the United States itself because we do have overwhelming strategic nuclear superiority, a very credible deterrent and the prospect, when technologically feasible, of a defense.

Mr. COX. I think I need to add to that because I disagree with it and there was disagreement expressed at our news conference on that very point. As soon as Congressman Spratt mentioned he thought there was a worse case analysis with respect to a particular item, Congressman Bereuter then said, I don't think it's the worse case at all, and rebutted it on the spot.

What you're seeing, therefore, is that this report represents a middle ground. Somebody might think it's a worse case, somebody might think it isn't the worse case at all. I can tell you in 30 seconds why it's not the worse case. All we've done is document actual thefts in here, but we don't know, because our intelligence is anything but perfect, how many thefts have actually occurred. We could surmise about the fact this is just the tip of an iceberg, which we haven't done; we have only laid out the facts and made inferences from things we actually know and consider how we know some of this stuff.

We know it because of a walk-in, just gratuitous and fortuitous for us I think, a presentation of information without which our own intelligence would never have detected this, although the W-88, we would have known about the testing. If you remember, that provoked an argument and the Intelligence Committee didn't agree about those inferences from the testing.

I think if you want to draw a worst case analysis, you don't come up with this report, you come up with one that says this is what we know, imagine what we don't know. So we wrote this report, the Democrats and Republicans together, meeting in the middle as you must in order to get a unanimous vote and we have different assessments of our own report but we can all stand by it and we all voted for it.

I should also point out the obvious which is——

Mr. DICKS. Enthusiastically.

Mr. COX. Which is in the Senate, that any member can provide additional views, not just any views but additional views when you vote for it. We presented this report without a single sentence of additional or dissenting views and we voted for it unanimously. So you get a little bit of what goes on inside a committee to produce that result but I think we're enthusiastic, as the Ranking Member just said, about what we produced for you.

Senator LEVIN. I don't know who is controlling the slides but could you put on the slide prior to that one about the People's Republic of China.

I'm a little confused by this. It says "The People's Republic of China has stolen design information on the United States' most advanced thermonuclear weapon." Then it says, "The stolen information includes classified information on seven U.S. thermonuclear warheads, including every currently deployed thermonuclear warhead in the U.S. ballistic missile arsenal."

That suggests that design information was stolen on seven U.S. thermonuclear warheads.

Mr. COX. No, that's not what it says. It says "The stolen information includes classified information on seven U.S. thermonuclear weapons." The next bullet says, "The stolen information also includes classified design information for an enhanced radiation weapon and in addition to that, there's classified and design information about the W-88." So those are the weapons referred to.

Mr. DICKS. And those are the two that they—

Senator LEVIN. I understand but my question is, if you look at the way it's laid out, it says, "The PRC has stolen design information"—that's the first paragraph, right?

Mr. COX. Yes.

Senator LEVIN. And then it says "The stolen information," which I think inadvertently is referring back to the prior paragraph but I don't think you really intend that. Is that correct? Do you see what I'm saying?

Mr. COX. The definite article "the" as opposed to—

Senator LEVIN. No, I just want to be real clear here. We don't believe or know that there was stolen design information on seven U.S. thermonuclear warheads?

Mr. DICKS. No, quite the contrary. I shouldn't say that. We don't know what we don't know, to quote the Rumsfeld Commission but we know to a certain degree what is in our report and our report says there is design information on the W-70, the W-88 and classified information about five other weapons.

Senator LEVIN. Is it fair to say that the classified information about five other weapons is not as compromising or as dangerous to us as stolen design information?

Mr. COX. It's less detailed, that's correct.

Senator LEVIN. So it would be less threatening or dangerous?

Mr. COX. The more detailed information the PLA gets, the more concerned we are, so the level of concern about the W-88 and the W-70 is higher.

Senator LEVIN. It's higher when it's design information.

Mr. DICKS. In fact, we think it's more usable.

Mr. COX. As Representative Dicks points out, the information on the W-88 and W-70 was so extensive that it permitted them successfully to test these weapons. Particularly with the W-88, that is a remarkable thing.

Senator LEVIN. The other clarification is at the beginning of the report, page VI, where it says, "The stolen U.S. nuclear secrets give the PRC design information on thermonuclear weapons on a par with our own." I'm not clear on that. Do we believe that they have design information on a par with our design information?

Mr. COX. Yes. Congressman Spratt raised that yesterday. That statement was some of what we considered at the time we wrote the report spilling over to today, what we had at one time talked about was what they've gotten that is on a par with our own, what capability and so on.

We changed the sentence at Chairman Spratt's request. Almost everyone on our Select Committee is a chairman and Congressman Spratt used to be the chairman. So now all it says is that the PRC has design information on a par with our own that is literally a tautology. They have our design information. Of course it's on a par with our own, it's our design information.

It doesn't say they have nuclear weapons on a par with ours. It says design information on a par with ours.

Senator LEVIN. Or that they have nuclear weapons design information that's a totality on a par with our own. You're not suggesting that?

Mr. COX. No, we're not saying that either.

Senator LEVIN. What you are saying is that whatever they stole of our design information gives them the same design information in that specific way that we have, is that correct?

Mr. COX. You're getting now into the spirit of the way we discussed just about every sentence that is in here.

Senator LEVIN. I just want to know if that's correct.

Mr. COX. That is correct.

Senator LEVIN. So if they had this 6 pages of design information that they stole, that 6 pages would be the same 6 pages we have?

Mr. COX. It's a little less acute than that. They have design information on a par with our own with respect to the weapons that we described here. They successfully tested them and they got the design information, in other words, they needed to pull it off.

Senator LEVIN. But that is not an overall judgment as to their design information on nuclear weapons as a whole then?

Mr. COX. No. We do feel comfortable, however, stating it in that way because the one they did get design information on is our most sophisticated weapon, for starters, and second, the neutron bomb is a weapon that if they were to deploy, they'd have something we don't have because we never have deployed that weapon.

Mr. DICKS. I think Congressman Spratt's concern here was that with all of the testing that we have done, with all of the weapons we have deployed, he feels we have superior design information than they do.

Mr. COX. Frankly, he's right.

Mr. DICKS. He is right, we don't dispute that, but the way this is written is limited to what was stolen.

Senator LEVIN. That's helpful. Last question.

On the comprehensive test ban treaty, let me start with Congressman Dicks on this since he and I have spoken about this before. Would you agree it's in our national interest if China does not conduct any more nuclear weapons tests and thus presumably cannot as readily make improvements that would rely on nuclear testing?

Mr. DICKS. Do you mean for us to ratify the comprehensive test ban treaty?

Senator LEVIN. Would you agree it's in our national interest?

Mr. DICKS. Yes.

Senator LEVIN. Congressman Cox.

Mr. COX. I think it's apples and oranges. It's possible that it might be but there is a different reason at work in our consideration of that restraint than the PRC's. We already have this significant arsenal that you just described and our reasons for testing involve not insignificantly, safety reasons. If you think it's legitimate for us to possess that arsenal, then we need to test for that reason.

The PRC we're trying to prevent from acquiring that arsenal and so the restraint in their case is designed to prevent the expansion

of the nuclear powers to include the PRC at a level with the United States.

Senator LEVIN. Would you agree preventing them from testing would, in essence, prevent them from acquiring these weapons in the first place?

Mr. COX. We've already got the weapons and preventing us from testing means that we live unsafely with our own nuclear arsenal that we've already deployed.

Senator LEVIN. Is it in our interest then, just on the apples question, that China did not test nuclear weapons?

Mr. COX. The PRC, yes, if that's the line of your question, that's an easy question. We agree with the answer to that, yes.

Senator LEVIN. Thank you, Mr. Chairman.

Senator COCHRAN. Any other questions? Senator Akaka.

Senator AKAKA. I just want to pick up on a question that was asked earlier.

Mr. DICKS. Mr. Chairman, may I interrupt?

Senator COCHRAN. Yes.

Mr. DICKS. Chairman Cox has a birthday party with one of his children and he's a half hour late.

Senator LEVIN. In that case, I withdraw all the questions I previously asked so you can get out of here 20 minutes ago.

Mr. COX. I'll tell you, national security is very important but Katie's fifth birthday party is a really big deal.

Senator AKAKA. If you'll permit me, Mr. Chairman, I'll make this very short. The question I asked was whether your report states that PRC has stolen and I said a specific U.S. guidance technology which is used on current and past generations of U.S. weapons systems. The question I asked and I didn't get an answer from you was, when did this theft occur, recently, early 1990's, the late, middle or early 1980's.

My question now is that specific U.S. guidance technology which is widely available and produced in significant quantities commercially and used in systems other than missiles, is that used in commercial aviation?

Mr. COX. Yes.

Mr. DICKS. Yes, Boeing airplanes.

Senator AKAKA. Thank you for your answer.

Senator COCHRAN. Thank you, Senator.

Thank you very much, Chairman Cox, Congressman Dicks.

The hearing is adjourned.

[Whereupon, at 6:35 p.m., the Subcommittee was adjourned, to reconvene at the call of the Chair.]

APPENDIX

---

**Select Committee on U.S. National  
Security and Military/Commercial  
Concerns with the People's Republic  
of China**

**Report Overview**

1

# Contents

1. Satellite Launches in the PRC: Hughes and Loral
2. PRC Missile and Space Forces
3. PRC Theft of U.S. Thermonuclear Weapons Design
4. High Performance Computers
5. Statutory and Regulatory Controls: The Export of Our Militarily Sensitive Technology
6. Commercial and Intelligence Operations: PRC Acquisition of U.S. Technology

In the aftermath of three failed satellite launches since 1992, U.S. satellite manufacturers transferred missile design information and know-how without obtaining the legally required licenses. This information has improved the reliability of PRC rockets useful for civilian and military purposes. The illegally transmitted information is useful for the design and improved reliability of future PRC missiles, as well.



In 1993 and 1995, Hughes showed the PRC how to improve the design and reliability of PRC military space launch vehicles. Hughes' advice may also be useful for design and improved reliability of future PRC ballistic missiles. Hughes deliberately acted without seeking to obtain the legally required licenses.

In 1996, Loral and Hughes showed the PRC how to improve the design and reliability of the guidance system used in the PRC's newest space launch vehicle. Loral's and Hughes' advice may also be useful for design and improved reliability of elements of future PRC ballistic missiles. Loral and Hughes acted without the legally required license, although both corporations knew that a license was required.



Military uses of the PRC Long March rockets improved by the U.S. technology assistance include:

- . Military communications and reconnaissance satellites
- . Space-based sensors
- . Space-based weapons, if successfully developed
- . Satellites for modern command and control and sophisticated intelligence collection

56

The Select Committee judges that the PRC military has important needs in these areas.

U.S. design and testing know-how and procedures communicated to the PRC during the launch failure reviews could be applied to the reliability of ballistic missiles. U.S. assistance included:

- Missile design
- Design analysis
- Testing procedures
- The application of technical know-how to particular failure analyses

In light of the PRC's aggressive espionage campaign against U.S. technology, it would be surprising if the PRC has not exploited security lapses that have occurred in connection with launches of U.S. satellites in the PRC.

It is in the national security interest of the United States to increase U.S. domestic launch capacity.

PRC Missile and Space Forces

The PRC has stolen U.S. missile guidance technology and exploited it for the PRC's own ballistic missile applications. The stolen guidance technology is currently used on a variety of U.S. missiles and military aircraft, including:

- The U.S. Army Tactical Missile System (ATACMS)
- The U.S. Navy Stand-off Land Attack Missile-Extended Range (SLAM-ER)
- The U.S. Navy F-14
- The U.S. Air Force F-15, F-16, and F-117 fighter jets

The stolen guidance technology has direct applicability to the PRC's intercontinental, medium- and short-range ballistic missiles, and its spacelift rockets.

The Select Committee has uncovered instances of the PRC's use of this specific stolen U.S. technology that:

- Enhances the PRC's military capabilities
- Jeopardizes U.S. national security interests
- Poses a direct threat to the United States, our friends and allies, or our forces

61

The Clinton administration has determined that particular uses by the PRC of this stolen U.S. technology cannot be disclosed publicly without affecting national security.



In the late 1990s, the PRC stole or illegally obtained U.S. developmental and research technology that, if taken to successful conclusion, could be used to attack U.S. satellites and submarines.

62

--Late 1990s U.S. research and development work on electromagnetic weapons technology that, once developed, can be used for space-based weapons to attack satellites and missiles.

--1997 U.S. developmental research concerning sensitive submarine detection techniques.

PRC Missile and Space Forces

PRC ICBMs targeted on U.S. cities are based on U.S. technology illegally obtained by the PRC in the 1950s, which illustrates the potential long-term effects of technology loss.



PRC Missile and Space Forces



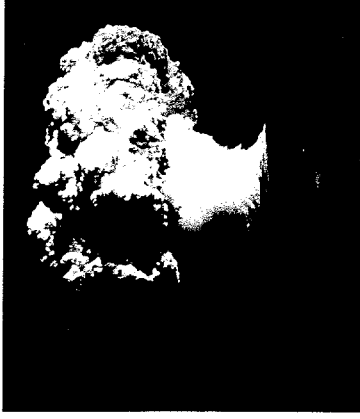
--In the 1950s, a U.S. military officer (Gen.. Qian Xuesen) and associated members of the design team for the U.S. Titan missile illegally gave U.S. missile and missile-related technology to the PRC. This information formed the basis for the PRC's CSS-4 ICBMs, targeted on the United States, and for the construction of CSS-4 silos.

PRC Theft of U.S. Thermonuclear Weapons Design

The People's Republic of China (PRC) has stolen design information on the United States' most advanced thermonuclear weapons.

The Select Committee judges that the PRC's next generation of thermonuclear weapons, currently under development, will exploit elements of stolen U.S. design information.

PRC penetration of our national weapons laboratories spans at least the past several decades and almost certainly continues today.



PRC Theft of U.S. Thermonuclear Weapons Design

The People's Republic of China (PRC) has stolen design information on the United States' most advanced thermonuclear weapons.

- The stolen information includes classified information on seven U.S. thermonuclear warheads, including every currently deployed thermonuclear warhead in the U.S. ballistic missile arsenal.
- The stolen information also includes classified design information for an enhanced radiation weapon (commonly known as the "neutron bomb"), which neither the United States, nor any other nation, has yet deployed.
- The PRC has obtained classified information on the following U.S. thermonuclear warheads, as well as a number of associated reentry vehicles (the hardened shell that protects the thermonuclear warhead during reentry).

PRC Theft of U.S. Thermonuclear Weapons Design

**The Select Committee judges that elements of the stolen information on U.S. thermonuclear warhead designs will assist the PRC in building its next generation of mobile ICBMs, which may be tested this year.**

68

**Despite repeated PRC thefts of the most sophisticated U.S. nuclear weapons technology, security at our national nuclear weapons laboratories does not meet even minimal standards.**

The PRC requires high performance computers (HPC's) for the design, modeling, testing, and maintenance of advanced nuclear weapons based on the nuclear weapons design information stolen from the United States.

69

The Select Committee judges that the PRC has in fact used HPC's to perform nuclear weapons applications.



High Performance Computers

Over the past several years, U.S. export controls on the sale of HPC's to the PRC have been steadily relaxed.

While the PRC had virtually no HPC's in 1996, the PRC had over 600 U.S.-origin HPC's at the end of 1998.

High Performance Computers

HPC's from the United States have been obtained by PRC organizations involved in the research and development of:

- Missiles
- Satellites
- Spacecraft
- Submarines
- Aircraft
- Military systems components
- Command and control
- Communications
- Microwave and laser sensors

High Performance Computers

The United States has no effective way to verify that U.S. HPC's reportedly purchased by the PRC for commercial purposes are not diverted to military uses.

- United States and international export control policies and practices have facilitated the PRC's efforts to obtain militarily useful technology.

Recent changes in international and domestic export control regimes have reduced the ability to control transfers of militarily useful technology. 73

The dissolution of COCOM in 1994 left the United States without an effective, multilateral means to control exports of militarily useful goods and technology.

The expiration of the Export Administration Act in 1994 has left export controls under different legislative authority that, among other things, carry lesser penalties for export violations than those that can be imposed under the Act.

74

U.S. policy changes announced in 1995 that reduced the time available for national security agencies to consider export licenses need to be reexamined in light of the volume and complexity of licensing activities.

24

U.S. policies relying on corporate self-policing to prevent technology loss have not sufficiently accounted for the risks posed by inherent conflicts of interest, and the lack of priority placed on dedicating resources to security in comparison to other corporate objectives.

The PRC has sought to obtain U.S. machine tools and jet engine technologies through fraud and diversions from commercial end uses.

76

In 1994-95 the PRC sought to divert an export of machine tools by McDonnell Douglas to military uses.

In 1991 the Department of Commerce decontrolled Garrett jet engines without consulting the Departments of Defense and State. This led to a PRC effort to acquire related jet engine production technology. Commerce was prepared to approve this transfer, which was only thwarted when the Defense Department was alerted by the U.S. Embassy in Beijing.



THE PRC'S TECHNOLOGY

軍民結合  
平戰結合  
軍品優養  
以民為先

Combine the military and civil; combine peace and war; give priority to military products; let the civil support the military

The PRC seeks advanced U.S. military technology to achieve its long-term goals. To acquire U.S. technology the PRC uses a variety of techniques, including espionage, controlled commercial entities, and a network of individuals and organizations that engage in a vast array of contacts with scientists, business people, and academics.

The PRC has mounted a widespread effort to obtain U.S. military technologies by any means — legal or illegal. These pervasive efforts pose a particularly significant threat to U.S. export control and counterintelligence efforts.

Efforts to deny the PRC access to U.S. military technology are complicated by the broad range of items in which the PRC is interested, and by transfers to the PRC of Russian military and dual-use technologies, which may make the consequences of the PRC's thefts of U.S. technology more severe.

The PRC uses commercial and political contacts to advance its efforts to obtain U.S. military, as well as commercial, technology.

81

The PRC has proliferated nuclear, missile, and space-related technologies to a number of countries.

New York Times  
May 26, 1999

## America's Stolen Secrets

A devastating pattern of security lapses is laid out in the Congressional report on China's acquisition of America's most vital nuclear and missile secrets. Beijing remains far from nuclear parity with the United States. But a bipartisan House committee, headed by Christopher Cox, Republican of California, found that China has systematically exploited poor security at American nuclear weapons labs, lax satellite licensing and weak export control laws to speed work on a new generation of nuclear weapons and missiles.

Though some of the committee's findings have been outlined in news accounts over recent months, the report adds fresh detail and serves as a powerful indictment of failed security and law enforcement by Democratic and Republican Administrations dating back to the 1970's. The Clinton Administration, in particular, has a great deal of explaining to do about its anemic response when it first learned of possible Chinese espionage. The Cox committee has performed an invaluable public service with its unsparing investigation.

The committee found that China had obtained classified information on seven of America's most modern thermonuclear weapons. These include the miniaturized bombs used in multiple-warhead missiles as well as in missiles launched from mobile platforms and from submarines. With this information, China may be able to produce similar weapons of its own. The stolen material, including computer codes that are essential to warhead design, most likely came from supposedly secure computers at America's nuclear weapons laboratories.

The report also found that Beijing had exploited commercial deals with American aerospace companies to learn how to avoid launch failures and design missiles more capable of delivering multiple warheads. The committee specifically found that two companies, Hughes Electronics and Loral Space and Communications, improperly advised the Chinese on rocket design in the mid-1990's without obtaining State Department licenses for such discussions. Despite these breakdowns, the Clinton Administration shifted authority for licensing satellite sales from the security-minded State Department to the business-oriented Commerce Department, a decision wisely reversed by Congress last year. Though earlier administrations also failed to secure America's nuclear secrets, the Clinton Administration's performance seems especially abysmal.

In particular, the failure of the national security adviser, Samuel Berger, to respond more vigorously when first briefed about possible nuclear espionage three years ago requires further inquiry. At a minimum Mr. Berger should have informed President Clinton and Vice President Gore, coordinated investigative efforts and made sure that his request for tightened security at the labs was carried out immediately. He also played an important role in the mistaken decision to give the Commerce Department lead authority in satellite licensing decisions.

Republican calls for Mr. Berger's resignation feel premature, but his fitness is in question and must be carefully weighed in the days ahead.

Similarly disturbing is the failure two years ago by Janet Reno's Justice Department to authorize Government investigators to pursue a wiretap of the principal suspect, Wen Ho Lee. Justice's handling of the Lee investigation was lackadaisical. This is but the latest in a series of law-enforcement lapses or political blunders that would have led to Ms. Reno's removal in any recent Administration other than this one. Serious lapses also occurred at the Energy Department, which, at least until Bill Richardson took over as Secretary last fall, failed to assert managerial control over the national weapons labs.

Congress must continue investigating these issues of responsibility, taking care, as the Cox committee did, to avoid sensationalism and undue partisanship. Together with the Administration, it should also move quickly to assure better protection of America's national security secrets.

Better coordination is needed among the various intelligence and law enforcement agencies in detecting, investigating and prosecuting nuclear espionage. The Energy Department must clearly demonstrate that it can manage the labs. Otherwise it may make sense to transfer them to Pentagon control. Whichever department is in charge, more rigorous security screening is needed for those engaged in the most sensitive weapons work.

Export-control laws, excessively relaxed at the end of the cold war and further loosened as part of the Clinton Administration's efforts to encourage commerce with China, must be significantly tightened, particularly with regard to satellites and supercomputers.

The Cox report makes clear the seriousness of Chinese efforts to acquire militarily sensitive technology and underscores America's vulnerability to such efforts. Stricter export laws and tighter security at nuclear weapons laboratories will help safeguard American secrets. But at least as important is a more careful approach on the part of the Clinton Administration to dealings with China. Beijing is worth cultivating as a diplomatic and commercial partner. But its potential threat to American national security should never be ignored or underestimated.

# The Washington Times Opinion

Published in Washington, D.C. 5am -- May 26, 1999 www.washtimes.com

FRONT PAGE	POLITICS	OPINION	INVESTIGATIVE	Other Sections
INTERNATIONAL	BUSINESS	LETTERS	SUBSCRIBE	GO

## EDITORIAL

### The Cox report

**T**he long-awaited Cox Report on Chinese espionage has finally been released. Even in its heavily redacted form -- the Clinton administration insisted on deleting a third of the original 700-page classified report -- the declassified version offers a frightening picture of China's "penetration of our national weapons laboratories [that] spans at least the past several decades and almost certainly continues today."

Among the conclusions of the bipartisan panel headed by Rep. Christopher Cox, California Republican:

- "The People's Republic of China (PRC) has stolen design information on the United States' most advanced thermonuclear weapons," including the multiple, independently targetable counterforce warheads that the United States deploys on its submarine-launched Trident D-5 ballistic missile and its land-based Peacekeeper intercontinental ballistic missile. "Espionage played a central role."
- "The PRC will exploit elements of the stolen design information on the PRC's next generation of thermonuclear weapons," including the three mobile missiles under development, one of which will be tested this year.
- "The stolen U.S. nuclear secrets give the PRC design information on thermonuclear weapons on a par with our own. . . . With the stolen U.S. technology, the PRC has leaped, in a handful of years, from 1950s-era strategic nuclear capabilities to the more modern thermonuclear weapons designs."
- "Counterintelligence programs at the national weapons laboratories today fail to meet even minimal standards."
- "In the late 1990s, the PRC stole or illegally obtained U.S. developmental and research technology that, if taken to successful conclusion, could be used to attack U.S. satellites and [heretofore invulnerable] submarines."
- "The dissolution of the Coordinating Committee for Multilateral Export Controls (COCOM) in 1994 left the United States without an effective international mechanism to control the transfer of important military technologies. . . . The United States relaxed restrictions on high-performance computer (HPC)

sales in 1996. . . . The PRC has been using HPCs for nuclear-weapons applications . . . [and the] research and development of missiles, satellites, spacecraft, submarines, aircraft," etc. The PRC, which had virtually no HPCs in 1996, had purchased more than 600 from the United States by the end of 1998.

From top to bottom, these conclusions -- and many others too numerous to cite -- demonstrate that the Chinese nuclear espionage and legal and illegal willful technology transfers will drastically compromise U.S. national security for decades to come.

When the media first began reporting details of this report in March, the Clinton administration, including President Bill Clinton, Vice President Al Gore and National Security Adviser Sandy Berger, reflexively reacted by insisting that no espionage had occurred during Mr. Clinton's term. "Not on our watch!" was their mantra. The Cox Report debunks this oft-repeated lie and implicitly criticizes the administration's lackadaisical response to the initial warnings it received more than three years ago. Worse, what the Chinese did not steal, the administration permitted them to buy from U.S. businesses by unilaterally dismantled export controls.

Congress must respond by holding in-depth hearings to pursue this issue. And the president ought to fire those who have served the nation badly, beginning with Mr. Berger and Attorney General Janet Reno, whose department stubbornly and irresponsibly prevented the FBI from conducting an investigation worthy of the damage Chinese nuclear espionage has caused.



Washington Post  
 May 26, 1999  
 Pg. 28

## Nuclear Pickpocket

UNDER U.S. LAW, the administration must conduct "end-user" checks to ensure that high-powered computers exported to China are not used for military purposes. China, however, rarely consents to such checks, and when it does, insists that they be conducted by Chinese officials. Yet, a bipartisan House committee reported yesterday, "this obduracy has had little consequence." The Clinton administration has approved the export of more and more such computers; in the first three quarters of 1998, nine times as many were exported as during the previous seven years.

This is one of many fruits of the engagement policy that President Clinton again yesterday defended. It is a policy based on the premise that China is a strategic partner, not a potential foe, and that the best way to ensure its continuing friendship is to accommodate to a large extent its demands and requests. It is also a policy, pursued by Republican and Democratic administrations alike, that has been more responsive to U.S. commercial interests than to U.S. national security needs, according to an 872-page report published yesterday by the House Select Committee chaired by Rep. Christopher Cox (R-Calif.). Mr. Cox, Democratic Rep. Norm Dicks of Washington and their seven colleagues assert that the damage to the United States is serious and ongoing.

The report maintains that China during the past 20 years has "stolen" information on the design of every nuclear warhead currently in the U.S. ballistic missile arsenal. It also has illicitly obtained classified technology useful for building missiles, attacking submarines and conducting other military tasks that could threaten the United States, Taiwan or U.S. forces in Asia. Virtually every one of the 80,000 Chinese visitors to the United States each year is told to collect some kind of information, the report says. So are many of the 100,000 students and academics based in this country and the 3,000 corporations with open or concealed Chinese connections. "No other country has succeeded in stealing so much from the United States," Mr. Cox says.

When a senior bureaucrat first tried to warn Congress of a possible security leak from a nuclear weapons lab, he says he was told not to testify. Later the administration suggested that any serious damage had occurred under previous presidents. When that assertion proved untenable, the administration insisted that it had reacted to the risk alertly and resolutely. But in fact its response was halting.

Ineptitude may have played a part in this apparent laxity. So, perhaps, did pressure from the business community, forever urging looser controls on exports lest other nations' companies get a leg up in the Chinese market. But it seems likely that Mr. Clinton's view of China as a relatively benign strategic partner also played a role. "Engagement," the report makes clear, is not one decision but dozens: to liberalize export controls, to allow the Commerce Department rather than the State Department to oversee satellite exports, to permit corporations to police their own security, to allow the Defense Department to sell high-tech military goods as "scrap" to Chinese companies, and so on. All of these decisions flow from a mind-set that the best way to keep China from turning hostile in the future is to show no signs of suspicion now.

Finding a balance between openness and caution will never be easy. Those same thousands of Chinese who represent an alleged security threat while here also offer hope for warmer U.S.-Chinese ties and better understanding in the future. Clamping down on information flows within U.S. nuclear labs might stymie some Chinese spies but would also slow American scientific progress. And the Chinese threat should not be overestimated; its arsenal of two dozen strategic nuclear missiles is no match for America's 6,000 strategic warheads.

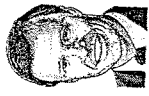
But the nuclear modernization that China is likely to accomplish in the next few years, to which the United States is depicted as unwitting patron, could significantly affect the regional balance of power, especially for Taiwan. China's long-range goals, including the annexation of Taiwan and becoming the predominant power in Asia, do not coincide with U.S. interests, the committee report argues. It does not follow that the United States should treat China as an enemy. But neither does it make sense for the United States to open its strategic pockets and allow China to help itself.

WALL STREET  
REVIEW & OUTLOOK  
5/26/99  
BOZZAL

### The Banquo Report

A ghost out of the end of the table yesterday as the Cox Commission served up a Chinese menu of espionage coups. As inexplicable as the American security blunders seemed, the right averted their eyes from the Clinton campaign finance scandal.

It is of course true that the first security breaches occurred under earlier administrations, including Republican ones. But there is an important work to be done in the failed procedures, and that this entire recognition of the problem. Indeed, Energy Secretary Bill Richardson, one of the administration's most honest men's skulls, has been



Christopher Cox

by all accounts made a credible start with this probe. The Cox Committee has given for self-peddling campaign finance in the interests of bipartisanship. Although this means the report stops short of complete understanding and real accountability.

Which is to say, in the midst of the President's re-election campaign, not to the Clinton administration. The Banking Committee, Whitewater. We're told that President Clinton himself was not let in on the secret until 1998. If true, this is itself reason to be

asked. We further know that Mr. Berger to be himself was not fired until this newspaper and the New York Times published stories about the leaks. And that until last fall, which is to say more than three years after wholesale spying was detected.

All of this, as the Marxists were wont to say, was no accident. There was a White House allowed to be created with talk of a "strategic partnership" with China, and with the late Ron Brown trying corporate fat cats to fund their multinational-dollar campaign. For the security Council post, Mr. Berger, a former China trade lobbyist, sat in on the weekly campaign strategy meetings where fundraising was discussed. The report, already showing an aura of cohesiveness, already show an

Loral and Hughes knowingly and illegally passed sensitive information to the Clinton campaign without securing required licenses.

Around the same time, money for the Clinton campaign was coming from Liu Chuying, daughter of China's retired senior military officer Liu Xiang, who served in the People's Liberation Army in her own right. The report concludes that Miss Liu's transfer of \$300,000 to Democratic fundraiser Johnny Chung in 1996 was an attempt to better position her in the Clinton campaign.

But worse, from the first, campaign finance and espionage have been intertwined. Indeed, the Cox panel itself from West Coast Democrats to a request committee to investigate reports whether contributions to Mr. Clinton's 1996 re-election campaign by Bernard Conwartz, head of Loral Space and Communications, and by the late Senator Parry's biggest contributor in 1996, influenced subsequent White House decisions on technology exports to China. Mr. Clinton himself happily approved the space program, and Mr. Berger has warned about the potential threat to national security, and later accepted requests from Hughes Electronics to transfer export approval authority to the Clinton administration. And the report concludes that

Mr. Reno's own Justice Department investigation has secured cooperation from Mr. Chung and Mr. Trinh, reportedly impeding. This is either progress or completion of a cover-up. Reports of the Huang agreement say Justice will specify that there is no evidence of any engagement in espionage or any violations of national security laws.

Meanwhile, Carl Cameron of Fox News Channel has obtained interesting leads on wiretap transcripts being reviewed by Mr. Clinton's Los Angeles lawyer who, Mr. Cameron reported, represented Chinese intelligence. Mr. Liu told him not to worry too much about the contributions, but to focus on the contributions from Hong and Loral, and in a discussion of connecting a cover story blaming the government but on "pricelings"—the illegitimate children of China's elite.

Mr. Clinton's Co-Chief of Staff agreed to handle it like this. The President over here also agreed. Fox reported the White House denial of any such agreement.

It is not clear where the bribery ended and extortion began. The report was transferred from his perch at Clinton's White House in the Oval Office after a September 11, 1995, meeting in the Oval Office with the President. Lippo scion James Ruddy, senior Clinton aide Bruce Lindsey and Joseph Girard, this looks like the winning of a Chinese fund-raising campaign. Mr. Clinton himself happily approved the space program, and Mr. Berger has warned about the potential threat to national security, and later accepted requests from Hughes Electronics to transfer export approval authority to the Clinton administration. And the report concludes that

**General Accounting Office Reports on DOE Security Issues**

Nuclear Fuel Reprocessing and the Problems of Safeguarding Against the Spread of Nuclear Weapons, (EMD-80-38; March 18, 1980).

Safeguards and Security at DOE's Weapons Facilities are Still Not Adequate, (C-GAO/EMD-82-1; August 20, 1980).

Security Concerns at DOE's Rocky Flats Nuclear Weapons Production Facility, (GAO/RCED-85-83).

Nuclear Nonproliferation: DOE Has Insufficient Control Over Nuclear Technology Exports, (GAO/RCED-86-144; May 1, 1986).

Nuclear Security: DOE's Reinvestigation of Employees has not been Timely, (GAO/RCED-87-72; March 10, 1987).

Nuclear Nonproliferation: Department of Energy Needs Tighter Controls Over Reprocessing Information, (GAO/RCED-87-150; August 17, 1987).

Nuclear Security: DOE Needs a More Accurate and Efficient Security Clearance Program, (GAO/RCED-88-28; December 29, 1987).

Nuclear Nonproliferation: Major Weaknesses in Foreign Visitor Controls at Weapons Laboratories, (GAO/RCED-89-31; October 11, 1988).

Nuclear Security: DOE Actions to Improve the Personnel Clearance Program, (GAO/RCED-89-34; November 9, 1988).

Nuclear Nonproliferation: Better Controls Needed Over Weapons-Related Information and Technology, (GAO/RCED-89-116; June 19, 1989).

Nuclear Security: DOE Oversight of Livermore's Property Management System is Inadequate, (GAO/RCED-90-122; April 18, 1990).

Nuclear Safety: Potential Security Weaknesses at Los Alamos and Other DOE Facilities, (GAO/RCED-91-12; October 11, 1990).

Nuclear Security: Accountability for Livermore's Secret Classified Documents is Inadequate, (GAO/RCED-91-65; February 8, 1991).

Nuclear Nonproliferation: DOE Needs Better Controls to Identify Contractors Having Foreign Interests, (GAO/RCED-91-83; March 25, 1991).

Nuclear Security: Property Controls Problems at DOE's Livermore Laboratory Continue, (GAO/RCED-91-141; May 16, 1991).

Nuclear Security: DOE Original Classification Authority has Been Improperly Delegated, (GAO/RCED-91-183; July 5, 1991).

Nuclear Security: Safeguards and Security Weaknesses at DOE's Weapons Facilities, (GAO/RCED-92-39; December 13, 1991).

Nuclear Security: Weak Internal Controls Hamper Oversight of DOE's Security Program, (GAO/RCED-92-146; June 29, 1992).

Nuclear Security: Improving Correction of Security Deficiencies at DOE's Weapon Facilities, (GAO/RCED-98-10; November 16, 1992).

Nuclear Security: Safeguard and Security Planning at DOE Facilities Incomplete, (GAO/RCED-93-14; October 30, 1992).

Personnel Security: Efforts by DOD and DOE to Eliminate Duplicative Background Investigations, (GAO/RCED-98-23; May 10, 1993).

Nuclear Security: DOE's Progress on Reducing Its Security Clearance Work Load, (GAO/RCED-93-183; August 12, 1993).

Nuclear Nonproliferation: U.S. Nuclear Materials Tracking Capabilities are Limited, (GAO)RCED/AIMD-95-5; December 27, 1994).

Department of Energy: Poor Management of Nuclear Materials Tracking System Makes Success Unlikely, (GAO/AIMD-95-165; August 3, 1995).

Nuclear Nonproliferation: Concerns with the U.S. International Nuclear Materials Tracking System, (GAO/T-RCED/AIMD-96-91; February 18, 1996).

DOE Security: Information on Foreign Visitors to the Weapons Laboratories, (GAO/T-RCED-96-260).

Department of Energy: DOE Needs to Improve Controls Over Foreign Visitors to Weapons Laboratories, (GAO/RCED-97-229; September 25, 1997).

Department of Energy: Information on the Distribution of Funds for Counterintelligence Programs and the Resulting Expansion of These Programs, (GAO/RCED-97-128R; April 25, 1997).

Department of Energy: Problems in DOE's Foreign Visitor Program Persist, (GAO/T-RCED-99-19; October 6, 1998).

Department of Energy: DOE Needs to Improve Controls Over Foreign Visitors to its Weapons Laboratories, (GAO/T-RCED-99-28; October 14, 1998).

Nuclear Nonproliferation: Concerns with DOE's Efforts to Reduce the Risks Posed by Russia's Unemployed Weapons Scientists, (GAO/RCED-99-54; February 19, 1999).