COMBATING NUCLEAR PROLIFERATION: THE EFFECTIVENESS OF THE DEPARTMENT OF ENERGY'S INITIATIVES FOR PROLIFERATION PREVENTION (IPP) PROGRAM

HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

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COMBATING NUCLEAR PROLIFERATION: THE EFFECTIVENESS OF THE DEPARTMENT OF ENERGY'S INITIATIVES FOR PROLIFERATION PREVENTION (IPP) PROGRAM

WEDNESDAY, JANUARY 23, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:05 a.m., in room 2123 of the Rayburn House Office Building, Hon. Bart Stupak (chairman) presiding.

Members present: Representatives Stupak, Green, Schakowsky, Inslee, Dingell (ex officio), Shimkus, Walden, Burgess, and Blackburn.

Staff present: Richard Miller, John Arlington, Scott Schloegel, John Sopko, Kyle Chapman, Dwight Cates, and Alan Slobodin.

Mr. STUPAK. This meeting will come to order.

Today we have a hearing entitled "Combating Nuclear Proliferation: The Effectiveness of the Department of Energy's Initiatives for Proliferation Prevention Program." Before I begin I would like to make two quick comments, if I may. First, I want to welcome my good friend John Shimkus as the new ranking member of the subcommittee. You inherit a very good staff on the subcommittee and we have a distinguished history of working together in a bipartisan manner and I know it will continue with you. I look forward to continuing that relationship and working with you in your new role as ranking member.

Second, I would like to take a moment to acknowledge the work of Chairman Bennie Thompson of the Homeland Security Committee. The GAO report that is the focus of today's hearing was produced for the Homeland Security Committee, and we appreciate the work on this important issue. I would also like to ask unanimous consent to enter into the record a statement from Chairman Thompson regarding the GAO report and the IPP program. Without objection, the statement will be entered in the record.

[The prepared statement of Mr. Thompson follows:]

BENNIE G. THOMPSON, MISSISSIPPI
CHAIRMAN

PETER T. KING, NEW YORK
RANKING MEMBER

One Hundred Tenth Congress
U.S. House of Representatives
Committee on Homeland Security
Washington, DC 20515

The Honorable Bennie G. Thompson
Statement for the Record for:
House Committee on Energy and Commerce
Subcommittee on Oversight and Investigations
Combating Nuclear Proliferation: The Effectiveness of the Department of Energy's Initiatives for Proliferation Prevention Program

On Friday, January 11, GAO released the report: NUCLEAR NONPROLIFERATION **DOE's Program to Assist Weapons Scientists in Russia and Other Countries Needs to Be Reassessed.**

The report was originally requested by my predecessor, then-Ranking Member of the House Select Committee on Homeland Security, Jim Turner. As his successor, the report was sent first to me by GAO. I thank GAO for a thorough report, and congratulate them, as always, for their fine work and their service to Congress and the American people.

In the report, GAO found key problems with DOE's Initiatives for Proliferation Prevention (IPP) programs. The IPP program was designed to give former weapons scientists employment in peaceful, non-weapons programs, thus lowering the temptation for them to be recruited by our enemies to build weapons. GAO found, however, that these programs are swaying off course and that of their survey of 6,450 scientists (out of a total of 16,770) more than half of them did not have former weapons related experience. These are not the people this program was designed to engage.

Upon reading this report, I asked my staff to forward the report to the Energy and Commerce Committee, as the program is under the jurisdiction of that Committee and I was sure that Chairman Dingell would be keenly interested in the findings of the report.

All experts agree that the gravest threat to our country, because of the drastic consequences, is a nuclear weapon. The best way to stop this threat is to secure nuclear material at its source: No nuclear weapon's material, no nuclear weapon. Secondly, terrorist organizations and rogue states are less likely to have the wherewithal to build a nuclear weapon than more developed nations. That would lead them to recruit former weapons scientists who are out of a job. That is why programs like IPP are important, but also why they need to focus on scientists with weapons experience. Terrorists or rogue states would have no need to recruit scientists with no weapon-related experience.

The risk to our country posed by "loose nuclear scientists" is nearly as great as that caused by "loose nukes" themselves. Successfully dealing with terrorism requires us to

look at the entire continuum of an attack, from intent and planning, to proliferation and procurement of weapons, interdiction, and if those efforts fail, response and recovery. Only through this layered approach - involving many different government agencies each doing their part - will we be successful. Resources cannot be wasted and should be reapportioned along this continuum as needed.

I applaud Chairmen Dingell and Stupak and Ranking Members Barton and Shimkus for recognizing the seriousness of this issue and for conducting rigorous oversight in this area. I know we are all in agreement that programs such as this one, if executed successfully, play an important role in increasing our Nation's security. However, if the program has run its course or moved in the wrong direction, Congress must make adjustments. I have no doubt that the Members of this Committee will determine the actions necessary to correct these problems and ensure that our limited resources are directed to programs that are maximally effective in protecting this country.

Bennie G. Thompson
Chairman

OPENING STATEMENT OF HON. BART STUPAK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. STUPAK. Each member will now be recognized for an opening statement, and I will begin.

Protecting the United States from a nuclear attack is one of our top priorities. Last year this subcommittee examined our ability to detect radioactive material being smuggled across our borders. Today's hearing will examine efforts to prevent proliferation of weapons of mass destruction. Our subcommittee intends to hold additional hearings this year to explore whether our government is doing enough to control, interdict and secure loose nukes and other weapons of mass destruction throughout the world.

There have been several recent examples of nuclear material and knowledge falling into the hands of dangerous individuals. In 2007, enriched uranium was interdicted in eastern Slovakia and Hungary. In 2006, stolen highly enriched uranium was seized in the former Soviet republic of Georgia. Last year North Korea exploded its first nuclear device in their continuing quest to develop nuclear bombs. Where did North Korea obtain their nuclear expertise? From the rogue metallurgists behind Pakistan's nuclear weapons program, Dr. A.K. Khan. Dr. Khan not only sold nuclear technology to North Korea but also to Libya, Iran and a fourth recipient whose identify has not yet been disclosed. Unfortunately, even though the United States provides Pakistan with more than $1 billion per year in aid, the Administration has apparently been unable to interview Dr. Khan to unlock all the secrets about his proliferation activities, information that could prevent the spread of nuclear weapons to other nations or terrorists.

At the end of the Cold War, it was estimated that the Soviets employed 50,000 to 60,000 nuclear experts, 65,000 bioweapons professionals and 6,000 chemical weapons experts. After the collapse of the Soviet Union in 1991, many of its weapon scientists and engineers suffered significant cuts in pay or lost their government-supported work. In response to the national security threat that unemployed or underemployed scientists would sell their knowledge to terrorist groups or countries of concern, the United States Department of Energy established the Initiative for Proliferation Program, IPP, in 1994. The IPP was developed as a means to engage in transit weapons of mass destruction scientists into peaceful commercial activities. The State Department operates a parallel program by helping former WMD institutes retain Soviet-era scientists in new missions using two science centers, one in Russia and one in the Ukraine. Nine years ago the Government Accountability Office (GAO) studied the effectiveness of the IPP program and issued a report that was critical of the program. A February 1999 report found that 63 percent of the money was spent in the United States, more than half the money going to DOE national labs. Only 37 percent of IPP funding went to Russia's scientific institutes. Overhead, taxes and fees further reduce the amounts actually received by Russian scientists.

In response, Congress modified the program capping the spending at the national laboratories to 35 percent and required the Energy Secretary to review projects for commercial potential and terminate those which "are not likely to achieve their intended com-

mercial objective." Today we will hear the results of a new 15-month GAO follow-up audit. It appears it is even more critical than their 1999 review. For example, GAO found that 54 percent of those hired on IPP projects it audited did not claim experience with weapons of mass destruction, the key goal of the IPP program. GAO also found that despite the fact that the State Department has graduated 17 institutes from their proliferation program because they determined that these institutes were self-sustaining, the DOE has continued to front 35 projects in Russia and the Ukraine at those 17 institutes. The GAO investigation questioned whether the IPP program may actually be contributing to the proliferation of weapons of mass destruction since its funds have been used to recruit and retain new scientists who are too young to have worked on Soviet-era weapons of mass destruction programs. At the same time, GAO also noted that some of the former weapons institutes being assisted by IPP are enjoying newfound prosperity. One has a marble-lined foyer with an art collection thanks to a gift from a former scientist. This begs the question of whether the institutes need U.S. funding to sustain employment for their scientists.

There are a number of additional questions that I look forward to having answered today about the continued need for the Initiatives for Proliferation Prevention program, whether there is a system in place to adequately evaluate the effectiveness of the IPP programs, whether the Russians should assume funding responsibility for the program and whether DOE can evaluate the proliferation threat risk associated with ending funding for IPP. The DOE needs to evaluate whether the money spent through the IPP program would be better spent in other parts of the world where local economies are not doing as well as in Russia and there may be a greater risk or temptation for scientists to sell their knowledge to terrorists or countries of concern.

Let me make this point clear. Cooperative threat reduction programs run by the Department of State and the DOE are valuable. The Initiatives for Proliferation Prevention program in particular has given former Soviet scientists a reason not to sell their knowledge to state or terrorist actors who want to develop a nuclear device. While the non-proliferation mission is important, it is imperative that we as Members of Congress assess DOE's past performance and future strategy to determine whether the projects funded by the IPP program are continuing to provide the intended non-proliferation benefits.

That concludes my statement.

Mr. STUPAK. I would like to now turn to my friend, Mr. Shimkus, for his opening statement, please.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SHIMKUS. Thank you, Mr. Chairman. It is great to be with you and your very great staff and I look forward to working with you. I also want to recognize Chairman Thompson for asking for this report. It has been very valuable and I think it helps lead our discussions.

Today's hearing will focus on a report by the GAO that has identified several serious problems with the DOE's Initiatives for Pro-

liferation Prevention, or IPP, program. GAO's findings raise serious doubts about the overall benefits of this non-proliferation program. GAO will testify that DOE has overstated the accomplishments of the Initiatives for Proliferation Prevention program and has failed to develop any meaningful criteria or performance measures to explain whether the Initiatives for Proliferation Prevention program is working.

We know DOE has funded thousands of Russian scientists but DOE has failed to demonstrate that this effort has led to any meaningful reduction in the non-proliferation threat posed by the former Soviet weapons scientists and what we are addressing today is the old trust but verify and let us see the results of the money that we are spending.

Furthermore, GAO has informed us that DOE has even funded scientists at Russian institutes who pose no proliferation threat or risk and who have no technical background in weapons of mass destruction. More importantly, DOE has overlooked several critical opportunities to reduce proliferation risk. For instance, the State Department has provided us with a list of 18 critical high-risk Russian institutes where brain drain is a threat. The committee Minority staff compared the State Department's high-priority list with a list of Russian institutes DOE is currently funding. Only three of the 18 highest priority Russian institutes identified by the State Department are currently funded through DOE's IPP program. GAO's report shows that DOE has not focused its resources on the highest risk institutes in Russian. Only last year, 13 years since the Initiatives for Proliferation Prevention program was created, did DOE finally begin to develop a risk prioritization system for targeting scientists at the Russian institutes. GAO will also testify that there is poor coordination between DOE and similar non-proliferation programs at the Department of State, Department of Agriculture, and I guess there are also programs with the Department of Defense and Health and Human Services. With such an apparent duplication of effort and failure to coordinate, we should examine whether these programs could or should be consolidated. Congress appropriated $30 million for the Initiatives for Proliferation Prevention program in 2008 in the Omnibus Bill, and of course, there is no specific line item but the original budget request was around $21 to $22 million. There is an overall increase. We have questions on how we are spending the money to begin with. The question is, why increase portions of that?

Who is the Initiatives for Proliferation Prevention program intended to benefit and why isn't Russia participating? Does Russia share the same concerns about the threat of terrorism and non-proliferation concerns? If they do, then it is time for them to contribute some money to help solve the non-proliferation threat. Where is the United States' return on investment? In coordination with the Energy Information Administration Committee, Minority staff has calculated that over just the past 3 years the United States has imported 150 million barrels of oil from Russia at a total of $8.68 billion and we have imported 49 billion barrels of fuel oil at a total price of $2.35 billion. This $11 billion in wealth transferred from the United States to Russia is enormous and it is one of the reasons Russia is running a budget surplus. Clearly Russia

can afford to participate in the IPP program. In light of Russia's growing wealth, I think it is clear the Russian government could step up to the plate and help address the proliferation threat posed by its own scientists.

If we decide to continue the Initiatives for Proliferation Prevention program into the future, DOE must first demonstrate that it has corrected serious management problems identified by GAO. If DOE demonstrates that the program is salvageable, the second step would be to get a cost-share commitment from the Russian government before we initiate any new Initiatives for Proliferation Prevention program projects at Russian institutes.

Thank you, Mr. Chairman.

Mr. STUPAK. I thank the ranking member for his statement.

I next turn to the chairman of the full committee, Mr. Dingell, for an opening statement. I am going to ask Ms. Schakowsky to take the chair as I have to testify at another hearing, and I will be back as soon as I get done. Mr. Dingell for an opening statement, please, sir.

OPENING STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. DINGELL. Thank you, Mr. Chairman. I appreciate your courtesy and I commend you for holding this hearing on nuclear proliferation. This is a very important subject and it is an issue of grave importance, given the continuing political instability in central Asia.

I want to observe first of all that I watched this program as its inception when I visited Russia and the Soviet Union at the time of the collapse of the then-Soviet Union. At that time it was a good program and it seemed to be focused and that it also seemed to have purpose and a sense of administrative solidarity. It has been regrettably virtually unreviewed and un-looked at by the Congress for a number of years and it is time that it be looked at very carefully to see to it that it has carried out its original purpose and whether in fact the program is doing what it should, given the way the world works today.

The Initiatives for Proliferation Prevention program, IPP, had at its inception a noble purpose. It must be noted that the central goal of this program was to provide proper incentives to the scientists who would be helped by it so that they would direct their expertise in peaceful ventures in partnership with private U.S. companies rather than to work for rogue states or terrorist groups, a matter of great importance then and of great importance now. This is certainly an innovative and useful approach today as it was then, and it was useful in preventing the spread of nuclear technologies then and now.

Since that time, however, the landscape has changed dramatically. Russia is now thriving. It is the largest oil producer in the world. It is the second largest oil exporter after OPEC. Its economy is booming. Unemployment is declining rapidly there. In short, given Russia's economic turnaround, it appears that the time has come for the IPP program to show Congress how it works, how it is justified, what it is doing and whether or not it has an exit strat-

egy that would be useful in terms of our other policy questions and its own concerns. Moreover, there is a serious question as to how effective the program has been. The Government Accountability Office (GAO) notes that an audit sample found that more than half of the scientists funded by the IPP program may not have had any weapons-related experience. In addition, the Department of Energy's assertions that the program has created thousands of long-term private-sector jobs for former scientists cannot be objectively verified. This underscores the basic question of whether the IPP program is funding the right people and perhaps whether it can be made to work at all. It is also curious to observe that it just might be that this is a program which is funding competition for our own industry using our taxpayers' monies.

I must voice my own skepticism about the efficacy of the IPP program. It is hard to imagine that today's Russian leaders would allow our Energy Department to employ their top weapons scientists. Indeed, DOE's senior officials informed the committee staff that the Russians would never let us anywhere near anyone they really care about. The deputy director of the IPP program concurred in that assessment.

Mr. Chairman, I begin by noting that the program was born, as I have said, with a noble purpose and I have no doubt that those who run this program do so with the best of intentions. There is, however, often a thin line between the noble and the nave. Finally, while today's hearing is focused on nuclear proliferation, I note that the IPP program and parallel Department of State programs are not limited to scientists who worked only on nuclear weapons but may also include scientists working with chemical and biological weapons. The Subcommittee on Oversight and Investigation has already initiated investigation into the proliferation of high-containment bioresearch laboratories with the first in a series of hearings on that subject held in October and more to come in this year. I would be interested to learn the extent to which DOE and the State Department may be involved in the funding of former biowarfare scientists or the construction of bioresearch laboratories in developing countries.

Mr. Chairman, you are doing great work and I look forward to exploring these issues further in this and in other hearings to come. Thank you for your recognition.

Ms. SCHAKOWSKY [Presiding]. Thank you, Mr. Dingell.

The Chair now recognizes Mr. Walden for an opening statement.

Mr. WALDEN. Thank you, Madam Chairman. I waive my opening statement given that we have got votes coming up within the hour, and I look forward to hearing from our witnesses.

Ms. SCHAKOWSKY. Mr. Burgess—Dr. Burgess. Excuse me.

Mr. BURGESS. Again, in the interests of time, because we do have votes coming up, I will submit my statement for the record and wait on the witnesses, and yield back.

[The prepared statement of Mr. Burgess follows:]

STATEMENT OF HON. MICHAEL C. BURGESS, MD

Thank you Chairman Stupak. Before I begin my brief remarks I would like to extend a warm welcome to our new Ranking Member, John Shimkus. I believe that

this is one of the most important subcommittees in Congress, and I look forward to working with you on the many important issues that comes before the Oversight and Investigation Subcommittee.

Throughout our nation's rich history, we have faced many threats to our national security, whether it was in the 1700's from England, the 1800s from the Civil War, the 1900's from the Soviet Union, or in present day, from Al Qaeda. We have endured times of war and proactively sought measures to prolong times of peace. However, as the times and enemies change, so must our strategy.

It is the duty of Congress, of this subcommittee, to reevaluate and reassess government programs, especially those programs of national security interest. What works, what doesn't? What is the best use of the taxpayer's dollar? Today, we will be discussing the Initiative for Proliferation Prevention Program. The program's intent, created in 1994, was to reduce the proliferation risk posed by weapon scientists in the former Soviet Union. Was this intent fulfilled? Is this program still effective? I welcome our witnesses from National Nuclear Security Administration, the State Department, and the Government Accountability Office to address these vital questions; and therefore, help to better secure the safety of our nation.

Again, Mr. Chairman, I thank you for this important hearing, and I yield back the balance of my time.

Ms. SCHAKOWSKY. Mr. Green?

Mr. GREEN. Madam Chair, I have a statement I would like to ask be placed into the record and just note, this is the second time in a decade that we have received a report critical of the IPP program and I appreciate the Chair having this hearing today and the oversight, and I will yield back my time.

[The prepared statement of Mr. Green follows:]

STATEMENT OF HON. GENE GREEN

Mr. Chairman, thank you for holding today's hearing on ″Combating Nuclear Proliferation: The Effectiveness of the Energy Department's Initiatives for Proliferation Prevention Program.″

Following the end of the Cold War, many believed the threat of attack from the Soviet Union's nuclear arsenal was over.

Little did we know then that these same nuclear weapons would pose as severe a threat today as they did at the height of the Soviet Union's power.

We no longer face brinkmanship with another world superpower, but 9/11 proved just how dangerous weapons can be in the hands of those who despise our nation's way of life.

Terrorist organizations have declared war against the United States. In this battle, we must assume that no weapon is out of reach, too expensive, or too destructive for our enemies to use against us.

Rouge nations, such as North Korea and Iran, have also shown that they will act against the will of the international community to develop dangerous weapon capabilities.

Our efforts to keep nuclear, biological and chemical weapons out of the hands of terrorist organizations or rogue nations have broadened greatly since the passing of the Nunn-Lugar Cooperative Threat Reduction Act in 1991.

Today Congress spends over $1 billion across three agencies - the Department of Energy, Defense, and State - for our nonproliferation efforts.

One such DOE program, the Initiatives for Proliferation Program, or the IPP program, was created to reduce the threat that scientists with expertise of weapons of mass destruction might provide that expertise to states or terrorists to threaten the U.S. or our allies.

It aims to achieve this by focusing on the twin goals of creating nonmilitary work and long-term job creation for weapons scientists in Russia and other former Soviet Union countries.

I hope today's hearing will shed some light on whether or not these goals are being achieved.

For the second time in a decade, the Government Accountability Office has issued a critical report on the IPP program and has provided recommendations for improvement.

Questions continue to loom regarding the program's lack of clear performance metrics and accurate reporting methods.

Congress has stepped in before to remedy deficiencies in the IPP program, and should do so again if the program fails to achieve U.S. nonproliferation and national security objectives.

I welcome our distinguished panel before us today, and I look forward to a lively discussion.

I yield back the balance of my time.

Ms. SCHAKOWSKY. Ms. Blackburn?

Ms. BLACKBURN. Thank you, Madam Chairman. I will yield back my time. I will place my statement in the record so that we can move forward with our witnesses. I think we all have lots of questions.

Ms. SCHAKOWSKY. Let me just say a few words and I will put my statement in the record.

Nearly 14 years have passed since the IPP program began and I am just very proud that this committee under the leadership of Chairman Stupak is looking into this, and this is exactly what the Oversight Subcommittee ought to be doing, looking at programs of all sorts, but I think maybe in particular those that are kind of obscure and yet lots of taxpayer dollars are going their way to evaluate those, so this is indeed a very important hearing.

My task at this point is to swear in our witnesses, so if they would—the witnesses are Mr. Robert Robinson, Managing Director of Natural Resources and the Environment of the GAO; Mr. Robinson is accompanied by Mr. Glen Levis, Assistant Director of Natural Resources and the Environment; Mr. Adam Scheinman, Assistant Deputy Administrator, Office of Nonproliferation and International Security at the Department of Energy's National Nuclear Security Administration; and Mr. Richard Stratford, Principal Deputy Assistant Secretary, Bureau of International Security and Nonproliferation at the Department of State. I want to welcome the panelists, and it is the policy of this subcommittee to take all testimony under oath, so please be advised that witnesses have the right under the rules of the House to be advised by counsel during their testimony. Do any of you wish to be represented by counsel? Then if you would, please rise and raise your right hand to take the oath.

[Witnesses sworn.]

Ms. SCHAKOWSKY. Let the record reflect that the witnesses replied in the affirmative, and you are now under oath.

Ms. SCHAKOWSKY. And now we will begin first with Mr. Robinson.[The prepared statement of Ms. Schakowsky follows:]

STATEMENT OF HON. JAN SCHAKOWSKY

Thank you Mr. Chairman for yielding and for holding this hearing on such an important issue.

At the time of the collapse of the Soviet Union, it is believed that the Soviets employed between 120,000 and 130,000 experts on nuclear and other weapons of mass destruction. With the Kremlin disbanded there was real fear that these suddenly unemployed scientists would sell their skills to the highest bidder. This fact presented a clear threat to the United States and the rest of the world. To prevent this from happening, the Congress created several programs, including the Initiatives for

Proliferation Prevention (IPP) intended to identify and procure employment for these experts in civilian research.

Nearly 14 years have passed since the IPP program began and yet today marks the very first time that Congress has conducted an oversight hearing on its effectiveness. Like many of my colleagues, I think that it was prudent for our government to have been active in ensuring that these brilliant minds did not end up working for rogue nations like North Korea or Iran, or terrorist organizations. I also believe that it was not the intention of Congress to create an endless source of financing for this program, but rather to provide immediate assistance to help these scientists find employment, after which the United States would gradually remove itself from the process. Despite this, evidence presented today by the Government Accountability Office suggests that in fact, the Department of Energy has ″not developed an exit strategy for the IPP program.″

I look forward to hearing from our panelists today so that we may learn more about the IPP program including whether it has been effective to date and lastly whether the program remains necessary in light of the rapidly improving economy in Russia.

I am particularly interested in hearing Mr. Scheinman's reactions to several findings in the GAO report including the fact that 54 percent of the scientists paid through the program claim to have no experience with weapons of mass destruction and 60 percent of those audited had not been soviet era scientists.

These facts seem to indicate that the IPP program may no longer serve its intended purpose and may need to be either reformed or phased out.

Again Mr. Chairman, I want to thank you for holding this hearing and I look forward to hearing from each of our panelists and I yield back the balance of my time.

Ms. SCHAKOWSKY. And now we will begin first with Mr. Robinson.

STATEMENT OF RICHARD ROBINSON, MANAGING DIRECTOR, NATURAL RESOURCES AND THE ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. ROBINSON. Thank you very much. We are happy to be here today. I would want to put into the record that I am pinch-hitting today for Gene Aloise, who was responsible for and conducted this work under his leadership. He is unfortunately undergoing medical treatment and is not able to be here today.

There are many details that emerge from our analysis of this program, Mr. Chairman, and I want to use my 5 minutes to lay out a few commonsense observations about the program that led us to our conclusion that the program needs to be fundamentally reassessed. I am focusing my remarks here because while DOE largely agreed with our recommendations, it disagreed with us on this issue. At the outset I want to say and mirror the comments that many of you have made that there is no doubt that the program has served a very useful purpose in helping us get through a dangerous period of high proliferation risk coinciding with the dissolution of the former Soviet Union. The program helped former Soviet-era weapons scientists through a period when they had either lost their jobs or suffered significant cuts in pay that could have led them to sell their knowledge to other countries or terrorist groups trying to develop weapons of mass destruction. Now, however, 14 years and $300 million later, the circumstances that led to the program's creation have dramatically changed, most notably, greatly improved economic conditions, particularly in Russia where 80 percent of the program's projects have been directed. With $100 barrel oil feeding the thriving Russian economy, the threat that former weapons scientists will need to sell their knowledge outside their

country appears to be significantly lessened. These economic conditions also raise questions about whether the Russian government could take on greater responsibility in this area. There are probably pockets of vulnerably at certain weapons institutes but these could be identified during the reassessment we called for. Our discussions at numerous institutes across Russia and Ukraine and with a senior Russian atomic energy agency official confirm the view that the program may no longer be relevant to today's realities. Many officials told us, in fact, that their bigger fear is that the scientists will emigrate to the United States and Western Europe and not to countries of proliferation concern.

Our analysis of the program's operations provide further support, we believe, for the need for fundamental program reassessment. Over half of the scientists being funded at the 97 projects we reviewed did not claim any weapon-related experience in the documentation we reviewed. Instead of being used to support former Soviet-era weapons scientists, the authorized design of the program, funding is now being used to attract, recruit and retain younger scientists that were too young to have had this experience. In this way, we may actually be helping sustain the continued operation of institute activities or, at a minimum, help the institutes develop technical capabilities that we ultimately may have to compete against. Ultimately, and importantly, DOE has not updated its metrics to judge the extent to which the program is actually reducing proliferation risk, and this is where we want to make sure the energy is concentrated here today, or adjust priorities so that funds can be targeted to the areas of highest need.

Just as troubling, there appears to be no exit strategy for the program. Unlike the Department of State, which has developed criteria specific in nature to graduate certain institutes from the program, DOE has developed no comparable strategies. As a result, DOE continues to support multiple projects that State ceased funding because it concluded that they no longer used U.S. assistance. Likewise, DOE is now expanding the program to other countries and purposes. It is now providing assistance to scientists in Iraq and Libya. The program is also developing projects to support another DOE program, GNEP, aimed at expanding the use of nuclear power in the United States and around the world. These efforts could very well have a useful national security purpose but it is not consistent with the original intent of the program and has occurred without a clear mandate from Congress.

To address these and other concerns, our report presented 11 recommendations, 8 of which DOE concurred with. In particular, they agreed with our program management recommendations dealing with developing better processes for verifying WMD backgrounds of participating scientists, seeking congressional authorization to expand the program outside the former Soviet Union and working with the State Department to better coordinate its similar programs.

As I said earlier, DOE disagreed with our recommendation to fundamentally reassess the program but based on the evidence presented in our report and summarized here today, I believe this recommendation is sound and, at a minimum, should include a thorough analysis of risk, a focused prioritization of program resources

on the highest risks, and a clear exit strategy that includes specific criteria for graduating countries, institutes and scientists from the program.

As the Comptroller General has said on many occasions, the Federal Government is on an unsustainable fiscal path, making it imperative that all Federal programs be efficiently focused on the highest priorities. There is no reason that this standard should not be applied to the IPP program.

Thank you, and I look forward to the discussion that follows.

[The prepared statement of Mr. Robinson follows:]

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives

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NUCLEAR NONPROLIFERATION

DOE Needs to Reassess Its Program to Assist Weapons Scientists in Russia and Other Countries

Statement of Robert A. Robinson, Managing Director
Natural Resources and Environment

GAO-08-434T

January 23, 2008

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Highlights

Highlights of GAO-08-434T, testimony before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives

NUCLEAR NONPROLIFERATION

DOE Needs to Reassess Its Program to Assist Weapons Scientists in Russia and Other Countries

Why GAO Did This Study

During the decades before its dissolution, the Soviet Union produced a cadre of scientists and engineers whose knowledge and expertise could be invaluable to countries or terrorist groups trying to develop weapons of mass destruction (WMD). After the Soviet Union's collapse in 1991, many of these scientists suffered significant cuts in pay or lost their government-supported work. To address concerns about unemployed or underemployed Soviet-era weapons scientists, the Department of Energy (DOE) established the Initiatives for Proliferation Prevention (IPP) program in 1994 to engage former Soviet weapons scientists in nonmilitary work in the short term and create private sector jobs for these scientists in the long term. GAO was asked to assess (1) DOE's reported accomplishments for the IPP program, (2) DOE's exit strategy for the program, and (3) the extent to which the program has experienced annual carryovers of unspent funds and the reasons for any such carryovers.

In December 2007, GAO issued a report—*Nuclear Nonproliferation: DOE's Program to Assist Weapons Scientists in Russia and Other Countries Needs to Be Reassessed*, (GAO-08-189)—that addressed these matters. To carry out its work, GAO, among other things, analyzed DOE policies, plans, and budgets and interviewed key program officials and representatives from 22 Russian and Ukrainian institutes.

To view the full product, including the scope and methodology, click on GAO-08-434T. For more information, contact Robert A. Robinson at (202) 512-3841 or robinsonr@gao.gov.

What GAO Found

DOE has overstated accomplishments on the number of scientists receiving DOE support and the number of long-term, private sector jobs created. First, although DOE claims to have engaged over 16,770 scientists in Russia and other countries, this total includes both scientists with and without weapons-related experience. GAO's analysis of 97 IPP projects involving about 6,450 scientists showed that more than half did not claim to possess any weapons-related experience. Furthermore, officials from 10 Russian and Ukrainian weapons institutes told GAO that the IPP program helps them attract, recruit, and retain younger scientists and contributes to the continued operation of their facilities. This is contrary to the original intent of the program, which was to reduce the proliferation risk posed by Soviet-era weapons scientists. Second, although DOE asserts that the IPP program helped create 2,790 long-term, private sector jobs for former weapons scientists, the credibility of this number is uncertain because DOE relies on "good-faith" reporting from U.S. industry partners and foreign institutes and does not independently verify the number of jobs reported to have been created.

DOE has not developed an exit strategy for the IPP program. Officials from the Russian government, Russian and Ukrainian institutes, and U.S. companies raised questions about the continuing need for the program. Importantly, a senior Russian Atomic Energy Agency official told GAO that the IPP program is no longer relevant because Russia's economy is strong and its scientists no longer pose a proliferation risk. DOE has not developed criteria to determine when scientists, institutes, or countries should "graduate" from the program. In contrast, the Department of State, which supports a similar program to assist Soviet-era weapons scientists, has assessed participating institutes and developed a strategy to graduate certain institutes from its program. Even so, we found that DOE is currently supporting 35 IPP projects at 17 Russian and Ukrainian institutes where State no longer funds projects because it considers them to have graduated from its program. In addition, DOE has recently expanded the program to new areas. Specifically, DOE began providing assistance to scientists in Iraq and Libya and, through the IPP program, is working to develop projects that support a DOE-led international effort to expand the use of civilian nuclear power.

In every fiscal year since 1998, DOE carried over unspent funds in excess of the amount that the Congress provided for the program. Two main factors have contributed to this recurring problem—lengthy review and approval processes for paying former Soviet weapons scientists and delays in implementing some IPP projects.

In its recent report, GAO recommended, among other things, that DOE conduct a fundamental reassessment of the IPP program, including the development of a prioritization plan and exit strategy. DOE generally concurred with GAO's findings, but does not believe that the IPP program needs to be reassessed.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Department of Energy's (DOE) Initiatives for Proliferation Prevention (IPP) program, which seeks to engage former Soviet weapons scientists in nonmilitary work in the short term and create private sector jobs for these scientists in the long term. Specifically, my remarks are based on the report we issued in December 2007—*Nuclear Nonproliferation: DOE's Program to Assist Weapons Scientists in Russia and Other Countries Needs to Be Reassessed.*[1] This report is our second review of the IPP program. In 1999, we found significant problems with DOE's management of the IPP program and, as a result, we made several recommendations that DOE has implemented to improve the program.[2]

After the Soviet Union's collapse in 1991, many scientists and engineers with weapons of mass destruction (WMD) knowledge and expertise suffered significant cuts in pay or lost their government-supported work. To address concerns that these scientists would sell their expertise to terrorists or countries of concern, DOE began its IPP program in 1994. Through October 1, 2007, there were 929 draft, active, inactive, and completed IPP projects involving personnel at about 200 nuclear, chemical, and biological institutes in Russia and other countries. As of April 2007, DOE reported it had supplemented the salaries of over 16,770 scientists, engineers, and technicians and created 2,790 long-term, private sector jobs in Russia and other countries through the IPP program.

My testimony today will discuss (1) DOE's reported accomplishments for the IPP program, (2) DOE's exit strategy for the IPP program, and (3) the extent to which the IPP program has experienced annual carryover balances of unspent funds and the reasons for such carryovers. In conducting our review, we examined 207 of the 929 IPP projects. We

[1]GAO-08-189 (Washington, D.C.: Dec. 12, 2007).

[2]See GAO, *Nuclear Nonproliferation: Concerns with DOE's Efforts to Reduce the Risks Posed by Russia's Unemployed Weapons Scientists*, GAO/RCED-99-54 (Washington, D.C.: Feb. 19, 1999). As a result of our 1999 review, DOE modified the IPP program by implementing requirements to (1) better categorize the weapons backgrounds of scientists participating in IPP projects; (2) review projects for potential dual-use technology; (3) limit funding for DOE national laboratories to no more than 35 percent for each IPP project; (4) eliminate basic research projects; (5) establish direct, tax-free payments to participating former Soviet scientists; and (6) institute audits conducted by the Defense Contract Audit Agency as a way of verifying proper transfer of IPP program funds and equipment.

selected this sample of projects on the basis of a variety of factors, such as geographic distribution, representation of all participating U.S. national laboratories, and project costs. We interviewed key DOE and national laboratory officials and analyzed documentation, such as program guidance, project proposals, and financial information. We also interviewed officials from 15 Russian and 7 Ukrainian institutes and 14 U.S. companies that participate in the program. In addition, we analyzed program cost and budgetary information, interviewed knowledgeable officials on the reliability of these data, and determined that they were sufficiently reliable for the purposes of our review. We conducted this performance audit from October 2006 through December 2007 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In Summary

DOE has overstated the number of WMD scientists receiving DOE support and the number of long-term, private sector jobs created. First, according to our analysis of 97 IPP projects involving about 6,450 scientists for whom we had complete payment information, more than half of the scientists paid by the program never claimed to have WMD experience. Furthermore, according to officials at 10 nuclear and biological institutes in Russia and Ukraine, IPP program funds help them attract, recruit, and retain younger scientists and contribute to the continued operation of their facilities. This is contrary to the original intent of the program, which was to reduce the proliferation risk posed by Soviet-era weapons scientists. For example, about 972 of the scientists paid for work on these 97 projects were born in 1970 or later, making them too young to have contributed to Soviet-era WMD efforts. Second, although DOE asserts that through April 2007, the IPP program had helped create 2,790 long-term, private sector jobs in Russia and other countries, we were unable to substantiate the existence of many of these jobs in our review of the projects DOE considers to be commercial successes. DOE relies on "good-faith" reporting and does not independently verify employment data it receives. Finally, DOE officials stated that the IPP program metrics are not sufficient to judge the program's progress in reducing proliferation risks. However, DOE has not updated its metrics or set priorities for the program on the basis of a country-by-country and institute-by-institute evaluation of proliferation risks.

DOE has not developed an exit strategy for the IPP program. Officials from the Russian government, Russian and Ukrainian institutes, and U.S. companies raised questions about the continuing need for the program. Importantly, a senior Russian Atomic Energy Agency official told us that the IPP program is no longer relevant because Russia's economy is strong and its scientists no longer pose a proliferation risk. However, DOE has not developed criteria to determine when scientists, institutes, or countries should "graduate" from the IPP program. In contrast, the Department of State, which supports a similar program to assist weapons scientists in Russia and other countries, has assessed participating institutes and developed a strategy—using a range of factors, such as an institute's ability to pay salaries regularly and to attract funding from other sources—to graduate certain institutes from its program. Even so, we found that DOE is currently supporting 35 IPP projects at 17 Russian and Ukrainian institutes where State no longer funds projects because it considers them to have graduated from its program and, therefore, no longer in need of U.S. assistance. Furthermore, DOE has recently expanded the program to include new countries and areas. According to a senior DOE official, this expansion was undertaken as a way to maintain the IPP program's relevance as a nonproliferation program. Specifically, DOE recently began providing assistance to scientists in Iraq and Libya and, through the IPP program, is working to develop projects that support the Global Nuclear Energy Partnership (GNEP)—a DOE-led international effort to expand the use of civilian nuclear power. DOE expanded the program's efforts without a clear mandate from the Congress and suspended parts of its IPP program guidance for projects in these new areas.

Regarding its management of IPP program funding, DOE has carried over unspent funds in excess of the amount that the Congress provided for the IPP program in every fiscal year since 1998. Two main factors have contributed to this recurring problem: (1) lengthy and multilayered review and approval processes by DOE and its contractors for paying former Soviet weapons scientists for IPP-related work and (2) long delays in implementing some IPP projects. DOE officials told us they are attempting to improve the program's financial oversight by developing a new program management system.

We recommended, among other things, that DOE comprehensively reassess the IPP program to help the Congress determine whether to continue to fund it. We believe this reassessment should include, at a minimum, a thorough analysis of the proliferation risk posed by weapons scientists in Russia and other countries, a well-defined prioritization

strategy to effectively target the scientists and institutes of highest proliferation concern, more accurate reporting of program accomplishments, and a clear exit strategy for the program. DOE generally agreed with our recommendations to improve the overall management of the IPP program, noting that a number of changes were already under way, but DOE did not agree that it needs to reassess the IPP program. We continue to believe that the nature, scope, and volume of problems we identified during the course of our review necessitates a reassessment of the IPP program to ensure that limited program funds are directed to the scientists and institutes of highest proliferation risk.

Background

IPP project proposals are prepared and submitted to DOE by officials from the participating national laboratories.[3] Each national laboratory provides technical and financial oversight for a set of projects. An Inter-Laboratory Board (ILAB) serves as the primary coordinating body for the national laboratories involved in the program. Partnerships are formed by the national laboratories between U.S. companies—known as industry partners—and institutes in Russia and other countries. IPP project proposals are reviewed by DOE's national laboratories, the IPP program office, and other agencies before they are approved for funding. Because the national laboratory prepares the proposal, the laboratory project manager is responsible for including, among other things, a list of intended participants and for designating the WMD experience for each participant. The proposed participants are assigned to one of the following categories: *Category I*—direct experience in WMD research, development, design, production, or testing; *Category II*—indirect WMD experience in the underlying technologies of potential use in WMD; or *Category III*—no WMD-relevant experience. After the project passes an initial review within the national laboratory, it is analyzed by the ILAB and its technical committees, which then forward the proposal to DOE for review. DOE, in turn, consults with State and other agencies on policy, nonproliferation, and coordination considerations. DOE's IPP program office is responsible for making final decisions on all projects.

DOE requires that at least 65 percent of each IPP project's funding be used as payments to individuals actually working on the project or to the

[3]The 12 national laboratories that participate in the IPP program are the Argonne, Brookhaven, Idaho, Lawrence Berkeley, Lawrence Livermore, Los Alamos, Oak Ridge, National Renewable Energy, Pacific Northwest, Sandia, and Savannah River National Laboratories and the Kansas City Plant.

participating institutes in payment for project-related supplies, equipment, and overhead. Because the IPP program is not administered through a government-to-government agreement, DOE distributes IPP funding through three tax-exempt entities to avoid paying foreign taxes. These organizations transfer funds directly to the personal bank accounts of IPP project participants. To receive payment, project participants must submit paperwork to these organizations indicating, among other things, whether they possess WMD experience.

DOE Has Overstated the IPP Program's Progress and Achievements

DOE has not accurately portrayed the IPP program's progress in the number of WMD scientists receiving DOE support and the number of long-term, private sector jobs created. Many of the scientists in Russia and other countries that DOE has paid through its IPP program did not claim to have WMD experience. Furthermore, DOE's process for substantiating the weapons backgrounds of IPP project participants has several weaknesses. In addition, DOE has overstated the rate at which weapons scientists have been employed in long-term, private sector jobs because it does not independently verify the data it receives on the number of jobs created, relies on estimates of job creation, and includes in its count a large number of part-time jobs that were created. Finally, DOE has not revised the IPP program's performance metrics, which are based on a 1991 assessment of the threat posed by former Soviet weapons scientists.

Many Scientists in Russia and Other Countries Who Did Not Claim Direct Experience with WMD Have Received Funds from DOE

A major goal of the IPP program is to engage former Soviet weapons scientists, engineers, and technicians, and DOE claims to have supplemented the incomes of over 16,770 of these individuals since the program's inception. However, this number is misleading because this figure includes both personnel with WMD experience and those without any WMD experience, according to DOE officials. We reviewed the payment records of 97 IPP projects, for which information was available and complete, and found that 54 percent, or 3,472, of the 6,453 participants in these projects did not claim to possess any WMD experience in the declarations they made concerning their backgrounds. We also found that DOE is not complying with a requirement of its own guidance for the IPP program—that is, each IPP project must have a minimum of 60 percent of the project's participants possessing WMD-relevant experience prior to 1991 (i.e., Soviet-era WMD experience). We found that 60 percent, or 58, of the 97 projects for which we had complete payment information did not meet this requirement.

Finally, many IPP project participants that DOE supports are too young to have contributed to the Soviet Union's WMD programs. Officials at 10 of the 22 Russian and Ukrainian institutes we interviewed said that IPP program funds have allowed their institutes to recruit, hire, and retain younger scientists. We found that 15 percent, or 972, of the 6,453 participants in the payment records of the 97 projects we reviewed were born in 1970 or later and, therefore, were unlikely to have contributed to Soviet-era WMD efforts. While DOE guidance for the IPP program does not prohibit participation of younger scientists in IPP projects, DOE has not clearly stated the proliferation risk posed by younger scientists and the extent to which they should be a focus of the IPP program.

DOE's Process for Assessing IPP Project Participants' WMD Credentials Has Weaknesses

In 1999, we recommended that, to the extent possible, DOE should obtain more accurate data on the number and background of scientists participating in IPP program projects.[4] DOE told us that it has made improvements in this area, including developing a classification system for WMD experts, hiring a full-time employee responsible for reviewing the WMD experience and backgrounds of IPP project participants, and conducting annual project reviews. However, DOE relies heavily on the statements of WMD experience that IPP project participants declare when they submit paperwork to receive payment for work on IPP projects. We found that DOE lacks an adequate and well-documented process for evaluating, verifying, and monitoring the number and WMD experience level of individuals participating in IPP projects.

According to DOE officials, IPP projects are scrutinized carefully and subjected to at least 8, and in some cases 10, stages of review to assess the WMD experience of the project participants. However, we found limitations in DOE's process. Specifically:

- DOE has limited information to verify the WMD experience of personnel proposed for IPP projects because government officials in Russia and other countries are reluctant to provide information about their countries' scientists. For example, three national laboratory officials stated that it is illegal under Russian law to ask project participants about their backgrounds, and that instead they make judgments regarding the WMD experience of the project participants on the basis of their personal

[4] GAO/RCED-99-54.

knowledge and anecdotal information.

- Some IPP project proposals may advance from the national laboratories to DOE with insufficient vetting or understanding of all personnel who are to be engaged on the project. Senior representatives at five national laboratories told us that they and their project managers do not have sufficient time or the means to verify the credentials of the proposed project participants.

- DOE does not have a well-documented process for verifying the WMD experience of IPP project participants, and, as a result, it is unclear whether DOE has a reliable sense of the proliferation risk these individuals pose. DOE's review of the WMD credentials of proposed project participants relies heavily on the determinations of the IPP program office. We examined the proposal review files that the program maintains, and we were unable to find adequate documentation to substantiate the depth or effectiveness of the program office's review of the WMD experience of proposed IPP project participants.

- Because it can be a matter of months or longer between development of an IPP project proposal and project implementation, the list of personnel who are actually paid on a project can differ substantially from the proposed list of scientists. For several IPP projects we reviewed, we did not find documentation in DOE's project files indicating that the department was notified of the change of staff or had assessed the WMD backgrounds of the new project participants. For example, one IPP project—to discover new bioactive compounds in Russia and explore their commercial application—originally proposed 27 personnel and was funded at $1 million. However, 152 personnel were eventually paid under this project, and we did not find an updated list of the project personnel or any indication of a subsequent review by DOE in the IPP project files.

The limited information DOE obtains about IPP project participants and the limitations in DOE's review of the backgrounds of these individuals leave the IPP program vulnerable to potential misallocation of funds. We found several instances that call into question DOE's ability to adequately evaluate IPP project participants' backgrounds before the projects are approved and funded. For example, a National Renewable Energy Laboratory official told us he was confident that a Russian institute involved in a $250,000 IPP project to monitor microorganisms under environmental stress was supporting Soviet-era biological weapons scientists. However, during our visit to the institute in July 2007, the Russian project leader told us that neither he nor his institute was ever involved in biological weapons research. As a result of this meeting, DOE

canceled this project on July 31, 2007. DOE's cancellation letter stated that the information provided during our visit led to this action.

DOE Has Overstated the Number of Jobs Created By the IPP Program

Although a senior DOE official described commercialization as the "flagship" of the IPP program, we found that the program's commercialization achievements have been overstated and are misleading. In its most recent annual report for the IPP program, DOE indicated that 50 projects had evolved to support 32 commercially successful activities. DOE reported that these 32 commercial successes had helped create or support 2,790 new private sector jobs for former weapon scientists in Russia and other countries.[5] In reviewing these projects, we identified several factors that raise concerns over the validity of the IPP program's reported commercial success and the numbers of scientists employed in private sector jobs. For example:

- The annual survey instrument that the U.S. Industry Coalition distributes to collect information on job creation and other commercial successes of IPP projects relies on "good-faith" responses from U.S. industry partners and foreign institutes, which are not audited by DOE or the U.S. Industry Coalition. In 9 of the 32 cases, we found that DOE based its job creation claims on estimates or other assumptions. For example, an official from a large U.S. company told us that the number of jobs it reported to have helped create was his own rough estimate.

- We could not substantiate many of the jobs reported to have been created in our interviews with the U.S. companies and officials at the Russian and Ukrainian institutes where these commercial activities were reportedly developed. For example, officials from a U.S. company we interviewed claimed that 250 jobs at two institutes in Russia had been created, on the basis of two separate IPP projects. However, during our visit to the Scientific Research Institute of Measuring Systems in Russia to discuss one of these projects, we were told that the project is still under way, manufacturing of the product has not started, and none of the scientists have been reemployed in commercial production of the technology.

[5]We found that DOE made a mathematical error in totaling the number of new jobs created and in migrating data from the U.S. Industry Coalition survey to the *Fiscal Year 2005 IPP Program Annual Report*. As a result, the actual total of new jobs that DOE should have reported is 2,780.

DOE Has Not Revised the IPP Program's Performance Metrics

The IPP program's long-term performance targets do not accurately reflect the size and nature of the threat the program is intended to address because DOE is basing the program's performance measures on outdated information. DOE has established two long-term performance targets for the IPP program—to engage 17,000 weapons scientists annually by 2015 in either IPP grants or in private sector jobs resulting from IPP projects, and to create private sector jobs for 11,000 weapons scientists by 2019. However, DOE bases these targets on a 16-year-old, 1991 National Academy of Sciences (NAS) assessment that had estimated approximately 60,000 at-risk WMD experts in Russia and other countries in the former Soviet Union. DOE officials acknowledged that the 1991 NAS study does not provide an accurate assessment of the current threat posed by WMD scientists in Russia and other countries. However, DOE has not formally updated its performance metrics for the IPP program and, in its fiscal year 2008 budget justification, continued to base its long-term program targets on the 1991 NAS estimate.

Moreover, DOE's current IPP program metrics do not provide sufficient information to the Congress on the program's progress in reducing the threat posed by former Soviet WMD scientists. The total number of scientists supported by IPP grants or employed in private sector jobs conveys a level of program accomplishment, but these broad measures do not describe progress in redirecting WMD expertise within specific countries or at institutes of highest proliferation concern. DOE has recognized this weakness in the IPP program metrics and recently initiated the program's first systematic analysis to understand the proliferation risk at individual institutes in the former Soviet Union. DOE officials briefed us on their efforts in September 2007, but told us that the analysis is still under way, and that it would not be completed until 2008. As a result, we were unable to evaluate the results of DOE's assessment.

DOE Has Not Developed an Exit Strategy for the IPP Program but Instead Has Expanded Efforts to New Areas

DOE has yet to develop criteria for phasing-out the IPP program in Russia and other countries of the former Soviet Union. Russian government officials, representatives of Russian and Ukrainian institutes, and individuals at U.S. companies raised questions about the continuing need for the IPP program, particularly in Russia, whose economy has improved in recent years. Meanwhile, DOE is departing from the program's traditional focus on Russia and other former Soviet states to engage scientists in new countries, such as Iraq and Libya, and to fund projects that support GNEP.

Russian Government Officials, Russian and Ukrainian Scientists, and U.S. Industry Representatives Questioned the Continuing Need for the IPP Program

Officials from the Russian government, representatives of Russian and Ukrainian institutes, and individuals at U.S. companies raised questions about the continuing need for the IPP program. Specifically:

- A senior Russian Atomic Energy Agency official told us in July 2007 that the IPP program is no longer relevant because Russia's economy is strong and its scientists no longer pose a proliferation risk.
- Officials from 10 of the 22 Russian and Ukrainian institutes we interviewed told us that they do not see scientists at their institutes as a proliferation risk. Russian and Ukrainian officials at 14 of the 22 institutes we visited told us that salaries are regularly being paid, funding from the government and other sources has increased, and there is little danger of scientists migrating to countries of concern.
- Representatives of 5 of the 14 U.S. companies we interviewed told us that, due to Russia's increased economic prosperity, the IPP program is no longer relevant as a nonproliferation program in that country.

In economic terms, Russia has advanced significantly since the IPP program was created in 1994. Some of the measures of Russia's economic strength include massive gold and currency reserves, a dramatic decrease in the amount of foreign debt, and rapid growth in gross domestic product. In addition, the president of Russia recently pledged to invest substantial resources in key industry sectors, including nuclear energy, nanotechnology, and aerospace technologies. Many Russian institutes involved in the IPP program could benefit from these initiatives, undercutting the need for future DOE support.

In another sign of economic improvement, many of the institutes we visited in Russia and Ukraine appeared to be in better physical condition and more financially stable, especially when compared with their condition during our previous review of the IPP program. In particular, at one institute in Russia—where during our 1998 visit we observed a deteriorated infrastructure and facilities—we toured a newly refurbished building that featured state-of-the-art equipment. Russian officials told us that the overall financial condition of the institute has improved markedly because of increased funding from the government as well as funds from DOE. In addition, one institute we visited in Ukraine had recently undergone a $500,000 renovation, complete with a marble foyer and a collection of fine art.

DOE Has Not Developed Criteria to Phase Out the IPP Program

DOE has not developed an exit strategy for the IPP program, and it is unclear when the department expects the program to have completed its mission. DOE officials told us in September 2007 that they do not believe that the program needs an exit strategy. However, they acknowledged that the program's long-term goal of employing 17,000 WMD scientists in Russia and other countries does not represent an exit strategy.

DOE has not developed criteria to determine when scientists, institutes, or countries should be "graduated" from the IPP program, and DOE officials believe that there is a continued need to engage Russian scientists. In contrast, State has assessed institutes and developed a strategy—using a range of factors, such as the institute's ability to pay salaries regularly and to attract external funding—to graduate certain institutes from its Science Centers program. We found that DOE is currently supporting 35 IPP projects at 17 Russian and Ukrainian institutes that State considers to already be graduated from its Science Center program and, therefore, no longer in need of U.S. assistance.

DOE Has Expanded Efforts to Iraq and Libya and Is Working to Support GNEP

DOE recently expanded its scientist assistance efforts on two fronts: DOE began providing assistance to scientists in Iraq and Libya, and, through the IPP program, is working to develop IPP projects that support GNEP. These new directions represent a significant departure from the IPP program's traditional focus on the former Soviet Union. According to a senior DOE official, the expansion of the program's scope was undertaken as a way to maintain its relevance as a nonproliferation program.

DOE has expanded the IPP program's efforts into these new areas without a clear mandate from the Congress and has suspended parts of its IPP program guidance for implementing projects in these new areas. Specifically:

- Although DOE briefed the Congress on its plans, DOE officials told us that they began efforts in Iraq and Libya without explicit congressional authorization to expand the program outside of the former Soviet Union. In contrast, other U.S. nonproliferation programs, such as the Department of Defense's Cooperative Threat Reduction program, sought and received explicit congressional authorization before expanding their activities outside of the former Soviet Union.

- In Libya, DOE is deviating from IPP program guidance and its standard practice of limiting the amount of IPP program funds spent at DOE's national laboratories for project oversight to not more than 35 percent of total expenditures.
- Regarding efforts to support GNEP, DOE has suspended part of the IPP program's guidance that requires a U.S. industry partner's participation, which is intended to ensure IPP projects' commercial potential.

The IPP Program's Large Balances of Unspent Program Funds Result from Multiple DOE and Contractor Reviews and Delays in Project Implementation

Since fiscal year 1994, DOE has spent about $309 million to implement the IPP program but has annually carried over large balances of unspent program funds. Specifically, in every fiscal year from 1998 through 2007, DOE carried over unspent funds in excess of the amount that the Congress provided for the program in those fiscal years. For example, as of September 2007, DOE had carried over about $30 million in unspent funds—$2 million more than the $28 million that the Congress had appropriated for the IPP program in fiscal year 2007. In fact, for 3 fiscal years—2003 through 2005—the amount of unspent funds was more than double the amount that the Congress appropriated for the program in those fiscal years, although the total amount of unspent funds has been declining since its peak in 2003.

Two main factors have contributed to DOE's large and persistent carryover of unspent funds: the lengthy and multilayered review and approval processes DOE uses to pay IPP project participants for their work, and long delays in implementing some IPP projects. DOE identified three distinct payment processes that it uses to transfer funds to individual scientists' bank accounts in Russia and other countries. These processes involve up to seven internal DOE offices and external organizations that play a variety of roles, including reviewing project deliverables, approving funds, and processing invoices. DOE officials told us that these processes were introduced to ensure the program's fiscal integrity and acknowledged the enormity of the problem that the lag time between the allocation of funds, placement of contracts, and payment for deliverables creates for the IPP program and told us they are taking steps to streamline their payment processes. In addition, Russian and Ukrainian scientists at 9 of the 22 institutes we interviewed told us that they experienced delays in payments ranging from 3 months to 1 year.

Delays in implementing some IPP projects also contribute to DOE's large and persistent carryover of unspent funds. According to officials from U.S. industry partners, national laboratories, and Russian and Ukrainian

institutes, some IPP projects experience long implementation delays. As a result, project funds often remain as unspent balances until problems can be resolved. These problems include implementation issues due to administrative problems, the withdrawal or bankruptcy of the U.S. industry partner, and turnover in key project participants.

In part to address concerns about unspent program funds, DOE began implementing its Expertise Accountability Tool, a new project and information management system designed to better manage IPP projects' contracts and finances, in October 2006. According to DOE officials, the system will allow instant sharing of IPP project data between DOE and participating national laboratories. DOE officials believe that the system will allow the IPP program office to better monitor the progress of IPP projects at the national laboratories, including reviews of IPP project participants' WMD backgrounds and tracking unspent program funds.

Mr. Chairman, this concludes my prepared statement. We would be happy to respond to any questions you or the other Members of the Subcommittee may have.

GAO Contact and Staff Acknowledgments

For further information about this testimony, please contact me at (202) 512-3841 or at robinsonr@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Gene Aloise (Director), Glen Levis (Assistant Director), R. Stockton Butler, David Fox, and William Hoehn made key contributions to this statement.

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Ms. SCHAKOWSKY. Mr. Scheinman.

STATEMENT OF ADAM SCHEINMAN, ASSISTANT DEPUTY ADMINISTRATOR, OFFICE OF NONPROLIFERATION AND INTERNATIONAL SECURITY, NATIONAL NUCLEAR SECURITY ADMINISTRATION

Mr. SCHEINMAN. Thank you, Chairwoman and Mr. Shimkus. Let me thank the committee for inviting me to testify today. I certainly welcome the opportunity to discuss the Global Initiatives for Proliferation Prevention program, which is one of a number of nonproliferation programs under the National Nuclear Security Administration and the Department of Energy. The GAO review of the GIPP program raises important questions and offers a list of recommendations. As noted, many of those we support, and I look forward to sharing our view of the program.

The need to prevent weapons of mass destruction proliferation through engagement of weapons scientists, engineers and experts has been a consistent policy objective of the United States including successive U.S. administrations. It is a goal in the National Security Strategy issued in 2002 which calls for "strengthened efforts to prevent rogue states and terrorists from acquiring the materials, technologies and expertise needed for weapons of mass destruction.

To advance that policy goal, GIPP uses technical expertise within the Department of Energy and the national labs to redirect former WMD personnel in other countries to peaceful, non-military work.

GIPP engages directly with personnel in Russia and former Soviet states, many of whom are employed by institutes not yet fully enjoying the benefits of Russian economy turnaround. The program provides the United States with an established capability to respond quickly and flexibly to emerging risks and opportunities in the nonproliferation arena.

Through GIPP, roughly 115 projects are underway in more than 100 institutes and facilities in Russia, Ukraine, Kazakhstan, Armenia, Georgia and Uzbekistan. Projects were launched more recently outside of the former Soviet Union including in Iraq and Libya, as has been noted. Taken together, the GIPP has engaged many thousands of WMD scientists and experts, which we view as an impressive achievement that serves our nonproliferation objects and our Nation's security.

Most GIPP projects involve a U.S. industry partner. Through its industry outreach component, GIPP has facilitated partnerships that are commercializing technologies that are in use today including landmine detectors, needle-free injectors, prosthetics, radioisotopes for cancer treatment and so on. Russian scientists and U.S. industry benefit from these partnerships.

At the State Department's request, GIPP responded to a nonproliferation imperative in Libya following Libya's decision to abandon its WMD programs, and we partnered with the State Department in Iraq. We are also prepared to engage elsewhere including North Korea if the circumstances warrant it.

Notwithstanding our limited programs in Libya and Iraq, the bulk of GIPP work today remains in Russia. We recognize of course that in many respects Russia has changed in 15 years since scientist redirection got underway. Russia's economy is more stable

and conditions in the closed cities are certainly improved. Accordingly, the threat of scientist migration is not one that gives us the greatest concern today.

But the absence of high risk of scientist migration doesn't imply zero risk or that the job is done. And in our view, as long as proliferation demand exists, we have a requirement to cooperate with others to impede supply, whether that involves improved expert controls, better border security or scientist engagement. Absence of high migration risk does imply that the manner in which GIPP has been traditionally carried out merits recalibration, as noted in the GAO report, and this is the path that we are on, started at the request of the NNSA administrator in 2006.

At the administrator's request, GIPP conducted an internal assessment much along the lines outlined by the GAO in its principal findings. Our conclusion in that assessment was that scientist engagement is contributing to nonproliferation goals and should continue but should be oriented to better meet the current threat. It should also contribute to technologies more supportive of the NNSA mission, whether that involves technology for nuclear safeguards, for nuclear security or proliferation-resistant nuclear energy systems. We certainly want to ensure that our partners have a strong security culture and that requires engagement of scientific personnel.

The conclusion of our internal review was approved by the administrator and endorsed a number of specific outcomes which I will highlight here.

First, in light of the changed threat environment, GIPP would adopt a more focused approach, emphasizing those institutes and facilities involved with enabling WMD technologies or expertise and where the program can provide a stabilizing influence.

Second, recalibrate the program to advance core NNSA nonproliferation missions, which I outlined a moment ago. Russia will be one of our most important partners in the effort to ensure that the global expansion of nuclear power is carried out in ways that reduce proliferation risks, and that is why we thought it makes sense to focus on proliferation resistance of the fuel cycle. Russia is a leading supplier and user and has nuclear energy expertise and facilities that rival ours in the United States, so we have an interest in continuing our engagement with Russia to ensure that a fuel cycle that evolves is one that is safer and more secure than the current generation. GIPP is one vehicle that can help that process.

Third, in response to changing requirements and program improvements, GIPP has reduced budget and uncosted balances. Our annual appropriation peaked in 2002 when the program was funded at $57 million and is today at roughly $30 million. In addition, budget allocations to projects in Russia have been reduced.

Fourth, the program opted to cancel its Nuclear Cities Initiative.

Ms. SCHAKOWSKY. Mr. Scheinman, just to note, you are a minute over now, so if you could wrap up?

Mr. SCHEINMAN. I will wrap up. We have canceled programs. We have considered transitioning our activity from assistance to partnership as noted in the opening statements, and consistent with GAO recommendations, we plan to update program guidance,

produce a strategic plan and enact a number of other improvements that I will be happy to deal with in the question-and-answer period.

Thank you for your attention, and I look forward to the questions.

[The prepared statement of Adam Scheinman follows:]

TESTIMONY OF ADAM M. SCHEINMAN

SUMMARY

•The Global Initiatives for Proliferation Prevention (GIPP) is a nonproliferation program of the National Nuclear Security Administration (NNSA). Its purpose is to advance U.S. policy objectives by impeding access by proliferators to weapons of mass destruction (WMD) expertise. The program was established in 1994 to address the risk of Russian and Soviet scientist migration, and has evolved to address risks in other countries.

•Given improved economic conditions in Russia, and at the request of the NNSA Administrator, NNSA examined and reassessed GIPP in 2006. The assessment concluded that the program should continue, but should be oriented to address the current threat environment and the NNSA nonproliferation and nuclear security mission. The Administrator also endorsed programmatic and management changes to strengthen the GIPP program. Specific improvements include:

Prioritizing engagement with Russian/Former Soviet Union (FSU) institutes and facilities involved with enabling WMD technologies;

•Recalibrating the program to advance NNSA nonproliferation and national security objectives, including technology projects that promote international safeguards, nuclear materials security, and proliferation resistance of the nuclear fuel cycle;

•Reducing budget and uncosted balances;

•Cancelling the Nuclear Cities Initiative;

•Promoting the goal of project cost-sharing with partners; and

•Continuing engagement with new partners (i.e., Libya and Iraq).

•As noted in the response letter to the GAO, NNSA agrees with many of the report's conclusions. While we note concerns, the program plans to implement many of the recommendations, or is already implementing similar reforms, to ensure a more effective program. NNSA will implement these recommendations with the understanding that scientist redirection activities are important to the achievement of U.S. nonproliferation goals.

TESTIMONY

Thank you Chairman Stupak and Mr. Shimkus, and allow me to thank the Committee for inviting me to testify today. I welcome the opportunity to discuss the Global Initiatives for Proliferation Prevention (GIPP) program, one of a number of nonproliferation programs managed within the Department of Energy's National Nuclear Security Administration (NNSA).

The GAO review of the GIPP program raises important questions and offers a list of recommendations, many of which we support. I look forward to sharing our view of the GIPP program, especially in relation to the recently released GAO report in the course of my statement, which I submit for the record.

The need to prevent weapons of mass destruction (WMD) proliferation through engagement of weapons scientists, engineers and experts has been a consistent policy objective of successive U.S. administrations. The Department of Energy's program in this area was established in 1994, and it is identified as a goal in the President's National Security Strategy and National Strategy to Combat Weapons of Mass Destruction, both issued in 2002. The National Security Strategy calls for ″strengthened nonproliferation efforts to prevent rogue states and terrorists from acquiring the materials, technologies, and expertise necessary for weapons of mass destruction.″

To advance this policy goal, GIPP uses the technical expertise within the Department of Energy and the national labs to redirect former WMD personnel in other countries to peaceful, non-military work.

GIPP engages directly with personnel in Russia and former Soviet states, many of whom are employed by institutes not yet fully enjoying the benefits of the Russian economic turnaround. The program also provides the United States with an es-

tablished capability to respond quickly and flexibly to emerging risks and nonproliferation opportunities in additional countries.

Through GIPP, roughly 115 projects are underway at more than 100 institutes and facilities in Russia, Ukraine, Kazakhstan, Armenia, Georgia, and Uzbekistan. Projects were launched more recently outside of the former Soviet Union, including in Iraq and Libya. Taken together, the GIPP has engaged many thousands of WMD scientists and experts - an impressive achievement that serves our nonproliferation objectives and our nation's security.

Most GIPP projects involve a United States industry partner. Through its industry outreach component, GIPP has facilitated partnerships commercializing technologies in use today: this includes land mine detectors, needle-free injectors, prosthetics, and radio-isotopes for cancer treatment. Russian scientists and U.S. industry both benefit from these partnerships.

At the State Department's request, GIPP responded quickly to support nonproliferation priorities in Libya following its decision to abandon all WMD programs. We also partner with the State Department in Iraq, and are prepared to engage elsewhere, including in North Korea if circumstances warrant it.

Notwithstanding our limited programs in Libya and Iraq, the bulk of GIPP work today remains in Russia. We recognize, of course, that in many respects Russia has changed in the fifteen years since scientist redirection work got underway. Russia's economy is stable and conditions in the closed cities are much improved. Accordingly, the threat of scientist migration is not one that gives us the greatest concern today.

But the absence of a high risk of scientist migration does not imply zero risk or that the job is done. To the contrary, as long as proliferation demand exists, we have a requirement to cooperate with others to impede supply, whether that involves improved export controls, better border security, or scientist engagement. Absence of high migration risk does imply, however, that the manner in which GIPP has been traditionally carried out merits some recalibration.

This is precisely the path we are on, started at the request of the NNSA Administrator roughly 18 months ago.

At the Administrator's request, GIPP conducted an internal assessment, much along the lines proposed by the GAO in its principal findings. Our conclusion was that scientist engagement is contributing to our nonproliferation goals and should continue, but oriented better to meet the current threat. It should also contribute technologies more supportive of the NNSA mission, whether that involves technology for nuclear safeguards and security or proliferation-resistant nuclear energy systems or ensuring that our partners have a good security culture, which requires engagement of scientific personnel.

The conclusion of our internal review was approved by the Administrator. Allow me to address a number of specific outcomes, nearly all of which correspond to comments in the GAO report.

First, in light of a changed threat environment, GIPP would adopt a more focused approach, emphasizing those institutes or facilities involved with enabling WMD technologies or expertise and where the program could provide a stabilizing influence.

Second, as I've alluded to, GIPP would calibrate the program to advance core NNSA nonproliferation and nuclear security imperatives. This includes directing new funds towards projects in Russia that support strengthened international safeguards and contribute to sustainable nuclear materials accountability and control, a high priority of our bilateral nuclear security agenda with Russia.

Russia will be one of our most important partners in the effort to ensure that the global expansion of nuclear power is carried out in ways that reduce proliferation risks. Russia is a leading nuclear supplier and user and has nuclear energy expertise and facilities that rival our own in the United States. Hence, we have an interest in continuing engagement with Russia to ensure that the nuclear fuel cycle evolves in ways that are safer, more secure, and less prone to proliferation than the current generation of technologies. GIPP is one vehicle that can help that process.

Third, in response to changing requirements and program improvements, GIPP reduced budget and uncosted balances. Annual appropriations peaked in 2002, when the program was funded at $57 million. The FY 2008 budget request was $22 million, and we are not planning for significant out-year increases. In addition, budget allocations to projects in Russia have been similarly reduced.

Fourth, the program opted to cancel its Nuclear Cities Initiative (NCI), a joint program launched during Russia's economic crisis. The program's cancellation allowed for a savings of $10 million.

Fifth, consistent with the trend away from assistance and towards genuine partnership with Russia, GIPP determined that it would promote the principle of project

cost sharing. This is consistent with a recommendation in the GAO report; we fully support it.

Taken together, these actions represent significant change that will strengthen the program.

They also complement management reforms undertaken over the past few years, including those recommended by the GAO in past audits of the program. This includes a new, automated project management system to improve internal record keeping; a reduction in the program's uncosted balances by nearly 50%; and incorporation of a "sunset clause" in GIPP project approvals to ensure that work gets started promptly and accomplished on schedule.

As the GAO recommends, there are additional steps the program can take to improve its management and process. Many are underway or will be accelerated. This includes streamlining our payment system for scientists that work on GIPP projects; updating performance metrics; improving our ability to verify the WMD bona fides of participating foreign scientists; and further reducing uncosted balances.

Consistent with GAO recommendations, by the end of this fiscal year we also plan to update our program guidance; produce a strategic plan that will better align the purpose and implementation of the program; and more effectively articulate an exit strategy.

In fact, as noted in our response letter published in the GAO report, while we have concerns, we say that "the report contains useful recommendations," and "can be helpful if it helps to spur the implementation of constructive program changes." We adhere to that position.

To be sure, we have not agreed to every recommendation. We do not believe, for example, that a fundamental reevaluation of GIPP is merited at this time. Nor do we believe that the program has outlived its usefulness, which the GAO report seems in places to suggest.

GIPP is modest in terms of budget - a tiny fraction of the total NNSA nonproliferation budget - but its purpose and need remain: our nonproliferation interests demand that we continue to address the proliferation threat in all its dimensions, including the risk of expertise being sought out and exploited by proliferator nations and organizations. Remaining directly engaged with these scientists through the GIPP program is an important part of the effort.

Thank you for your attention and I look forward to our discussion.

Ms. SCHAKOWSKY. Thank you.

Mr. Stratford.

STATEMENT OF RICHARD STRATFORD, ACTING DEPUTY ASSISTANT SECRETARY, BUREAU OF INTERNATIONAL SECURITY AND NONPROLIFERATION

Mr. STRATFORD. Thank you, Madam Chairwoman. At the outset, let me make a minor correction to the record. I am not Principal Deputy Assistant Secretary in the Bureau. I am the Acting Deputy Assistant Secretary for the nuclear side of the Bureau and I have only been doing that for about 3 weeks. In real life, I am the U.S. rep. for both the Nuclear Suppliers Group and the Zanger Committee, and I am also the person who negotiated both the United States-India and the United States-Russia Agreements for Cooperation. That is my normal end of the business.

Today I have a written statement for the record but I just want to pick out a few high points for the attention of the committee. Most of the statement deals with so-called Science Centers program which consists of the International Science and Technology Center in Moscow and the Science and Technology Center in Ukraine, which support efforts to reduce the risk of WMD terrorism by engaging and redirecting scientists, engineers and technicians in the former Soviet Union who have biological, chemical, nuclear or missile expertise. Now, we do that by approving and funding projects that are directed through those two centers. Those projects are re-

viewed in an interagency process to address issues including proliferation risk, consistency with U.S. policy, technical merit and market potential. Now, there are annual financial audits of the centers' operations and the Defense Contract Audit Agency and our scientists also conduct annual audits of projects.

One of the things I have heard here so far is about cost sharing. We are engaging host states to increase cost-sharing funding of projects. We have a memorandum of understanding with Belarus where they contribute funds directly to institutes and we are also funding projects in Ukraine and Azerbaijan, splitting the cost 50/50.

Now, there is a slight difference between what DOE focuses on and how we focus our program. We are less focused on the individuals than we are on the institutes. We started with about 200 institutes that we thought needed to be made self-sustaining so we focused the projects at the institute and tried to make them self-sustaining in the longer term. Now, one of the other things I heard was the need for an exit strategy, and our exit strategy is to make those 200 institutes self-sustaining. We hope to do that with about 20 a year. We hope to be out of this by 2012, which means we have a goal to get there from here. I think the program has generally been successful. Our overarching goal, as I said, is to help these institutes become self-sustainable, and when they are, we define that as "graduation" from the program.

Now, one of the other things I heard, oh, well, DOE is still funding projects at institutes that have graduated. That is true, but we do too. We can make a finding that an institute is self-sustaining but then after the fact we may look at the institute and say you know what, there is still a residual risk there regardless of whether it is self-sustaining and there may be something we can do about it through the Science Center program. Regarding the GAO's recommendations to work with NNSA to develop a joint plan to better coordinate the IPP program and our programs, the answer is, we concur. We are prepared to try to more closely coordinate program elements and will consult with DOE on implementing this recommendation.

Madam Chairman, let me stop there but let me also say that with respect to the Science Center programs, we do have difficulties from time to time, so I don't want to leave the impression that all is sweetness and light. Sometimes Russians can be difficult. Right now, for example, they think they have a right to know what we pay people that we send to support the institute. They also have an issue with appointing a finance officer, who we happen to think is necessary. I hope we are going to settle that very shortly. But I just want to make clear that there are difficulties from time to time and we have to try to sort those out with our Russian host government colleagues.

I am going to stop here and I am very pleased to answer any questions the committee might have.

[The prepared statement of Mr. Stratford follows:]

TESTIMONY OF RICHARD J.K. STRATFORD

INTRODUCTION

Thank you for the opportunity to speak with you today about one of State Department's successful programs to prevent proliferation of Weapons of Mass Destruction (WMD)-related expertise. We believe that the Science Centers program has been effective over the years and we appreciate the support we have received from Congress. We work through two multilateral centers in Moscow and Kyiv to redirect the activities of personnel capable of contributing to the development and deployment of weapons of mass destruction. This is an era of global terrorist threats that need to be met, while at the same time dealing with rising costs and budget constraints. These realities require us to continually assess our own efficiency and effectiveness while ensuring that important nonproliferation work continues to get done.

REVIEW OF DEPARTMENT OF STATE COOPERATIVE THREAT REDUCTION PROGRAMS

Let me say a few words about our Cooperative Threat Reduction (CTR) programs generally. State's CTR programs have a global mission to redirect weapons of mass destruction (WMD) expertise worldwide. We do this by coordinating and overseeing the U.S. participation in and funding of the Science Centers to engage former Soviet Union (FSU) era biological, chemical, nuclear, and missile expertise through the centers in Moscow and Kyiv, the International Science and Technology Center (ISTC) and Science and Technology Center in Ukraine (STCU), as well as scientist engagement efforts in Iraq and Libya.

State's redirection effort also includes the Bio-Industry Initiative (BII), which creates international commercial opportunities and public-private partnerships for former weapons scientists thereby promoting self-sustainability, reconfigures several large-scale former Soviet biological weapons production facilities for civilian biotechnology purpose, and engages self-identified former weapons personnel in projects aimed at accelerating drug and vaccine development to combat highly infectious diseases. Finally, State coordinates the BioChem Redirect (BCR) Program, which redirects former Soviet chemical and biological weapons personnel into peaceful sustainable civilian work and engages high risk facilities, with participation of U.S. experts from the Department of Health and Human Services (HHS), Department of Agriculture (USDA), and the Environmental Protection Agency (EPA).

Even as we continue to work in Russia and the FSU, State's CTR programs also provide us with the capability to address the new and emerging global WMD threats that we face, including in Asia, the Middle East, and Africa. State's Biosecurity Engagement Program (BEP), which seeks to prevent bioterrorism by reducing terrorist access to potentially dangerous biological materials, equipment and expertise, initially focused on countries and regions outside the FSU where emerging bioscience sectors, highly infectious disease outbreaks, and terrorist threats coexist. Similarly, State's Chemical Security Engagement Program (CSP) engages experts from around the world to decrease the chemical threat by improving chemical threat awareness, improving chemical security and safety best practices in academia and industry, and increasing chemical security and safety by fostering collaborations between chemical professionals in academia and industry.

In addition to meeting critical nonproliferation objectives, these programs advance Department of State efforts toward transformational diplomacy by building and maintaining ties to regions and countries of U.S. national security interest and by helping states, institutes and individuals build the capacity to help themselves. CTR programs also promote economic development and self-sustainability for institutes and individuals while achieving their mission of reducing the threat of WMD proliferation worldwide.

U.S. ENGAGEMENT AT INTERNATIONAL SCIENCE AND TECHNOLOGY CENTER (ISTC) AND THE SCIENCE AND TECHNOLOGY CENTER IN UKRAINE (STCU)

The Science Centers program consists of the International Science and Technology Center (ISTC) in Moscow and the Science and Technology Center in Ukraine (STCU) in Kyiv and supports efforts to reduce the risk of WMD terrorism by engaging and redirecting scientists, engineers, and technicians in the FSU who have biological, chemical, nuclear or missile expertise. In addition to redirecting former Soviet WMD personnel, the Science Centers projects also aid civilian scientific research. Our Science Centers program focuses on evolving the Science Centers in Moscow and Kyiv toward partnerships with host governments, and continuing to engage and promote transparency and self-sustainability at high priority former WMD institutes.

The Department of State acts as the U.S. representative in the two international science centers, the ISTC and the STCU, as well as our related redirection efforts, the BioIndustry Initiative (BII) and the Bio-Chem Redirect Program. Under the direction of Acting Under Secretary John C. Rood, each of these State-led efforts meets critical national security goals and is driven by threat information on nonproliferation and counter-terrorism. Thus, we work closely with the entire U.S. interagency to identify the most pressing global threats for all of our Global Threat Reduction (GTR) programs, including the Science Centers in the FSU. State has authorities for the Science Centers Program through the Nonproliferation, Antiterrorism, Demining, and Related programs (NADR): chapter 9 of part II of the Foreign Assistance Act of 1961 (22 U.S.C. 2349bb et seq.). Additionally, the Science Centers support the objectives of the National Strategy to Combat Weapons of Mass Destruction, the United Nations Security Council Resolution 1540, and the President's National Strategy for Combating Terrorism.

U.S. Government funding for cooperative threat reduction activities, including the ISTC and STCU, is appropriated by the U.S. Congress to the Department of State, Department of Defense (DoD), and the Department of Energy (DOE) as the main entities charged with fulfilling the 1992 Nunn-Lugar Cooperative Threat Reduction Program mandate. Under the Nunn-Lugar Program, the three Departments work very closely on complementary efforts to lessen the global threat of WMD materiel and expertise proliferation from the FSU.

FOCUSING FUNDING TO ACHIEVE U.S. NONPROLIFERATION GOALS

While we had heavily funded general science projects with nonproliferation and scientific merit in the past, since the beginning of 2007 funding of regular projects has instead been concentrated on a small number of institutes that face the most important proliferation risks. In 2007, State worked closely with other U.S. agencies, including the Department of Energy, to focus Science Center activities on the highest priority institutes in the FSU and to help those institutes become financially self-sustainable. We have engaged with the other funding countries at the ISTC and STCU in a discussion about how to help institutes achieve those objectives and have approved new programs for 2008 at both Centers to achieve institute financial self-sustainability.

Projects under consideration for funding are reviewed in an interagency process to address issues including proliferation risk, consistency with U.S. policy, technical merit, and market potential. These reviews also address the risk that the projects might inadvertently contribute to increasing the military capabilities of the recipient states, including Russia. Reviews are conducted on hundreds of proposals annually and there are also annual financial audits of the Centers' operations and a sample of U.S.-funded projects. The Defense Contract Audit Agency (DCAA) and our scientists also conduct audits of selected projects annually.

TRANSFORMATION OF THE CENTERS TO MEET GLOBAL NONPROLIFERATION GOALS AND BECOME SELF-SUSTAINING

In order to address new and emerging global WMD threats, State led discussions at the ISTC about exploring opportunities to transform it through joint nonproliferation and counter-terrorism projects, as well as joint projects in countries outside Russia and the CIS. State participated in drafting a Strategic Vision document for the ISTC outlining graduation, global nonproliferation, and efficiency goals. The Russian government is also addressing the question of how to transform the ISTC. In 2008, State intends to continue the discussion about transforming the ISTC to meet the emerging, new proliferation threats and to inaugurate a similar discussion at the STCU, a topic heavily stressed at its September 2007 Advisory Committee meeting.

In addition to funding for regular scientific research and development projects, Partner project funding, both from other U.S. Government agencies and U.S. private industry, is an increasingly important funding component at both Science Centers. Funding for Partner projects from the U.S. and other countries continues to rise and is essential for the future of the Science Centers to sustain their important nonproliferation work. For this reason, we have emphasized the importance of expanding efforts to attract global partners to the Science Centers and have contributed funding to these efforts towards making the Science Centers self-sustainable in the future.

These objectives contribute to our vision of the transformation and evolution of the Science Centers toward a greater partnership between the financing parties, member nations, and the Centers to jointly address emerging, global nonproliferation challenges. Evolving cooperation on the redirection of former Soviet defense in-

dustry scientists to peaceful scientific pursuits is an excellent basis for cooperation on joint counter-terrorism nonproliferation programs and nonproliferation programs in other nations outside the FSU.

HOST STATE COST-SHARING

State is also engaging host states to increase cost-sharing in the funding of projects. In 2007, the ISTC signed a Memorandum of Understanding with Belarus wherein Belarus contributes funds directly to its institutes for items such as equipment when projects are funded through the ISTC. State also jointly funded Targeted Research Initiative (TRI) projects through the STCU in Ukraine and Azerbaijan, splitting the cost 50/50, between the funding parties and the host state respectively. For 2008, State aims to continue the tradition of joint-funding TRIs with Ukraine and Azerbaijan and hopes to reach an agreement with Moldova on sharing the costs of TRIs. State has also encouraged this kind of scientific and nonproliferation cooperation with host states at the ISTC, specifically by requesting Russian funding for projects and staff salaries.

ACHIEVING INSTITUTE FINANCIAL SELF-SUSTAINABILITY

In place of State's previous levels of regular project funding, the U.S. has focused its funds toward specific institutes to achieve self-sustainability and ″graduation″ from State project funding. We re-evaluated the emphasis on regular project funding in favor of multilateral partnerships to meet emerging global nonproliferation and cooperative threat reduction challenges and needs. Therefore, we proposed to meet this objective by emphasizing scientific institute self-sustainability and ″graduation″ from U.S. regular project funding.

Of the thousands of scientific institutes in the ISTC and STCU member nations, we categorized approximately 200 core institutes as ″priority″ institutes for a self-sustainability/graduation discussion. We determined that many of these institutes were already self-sustainable and have grouped the remaining institutes by the year in which we believe they can reach financial self-sustainability through ISTC engagement, implementing an institute-specific self-sustainability plan, and by gaining enough funding on their own.

Our over-arching goal to redirect FSU WMD expertise includes giving these and other institutes the tools to become self-sustainable - to be able to conduct peaceful world-class research and development by attracting national and international funding independent of regular project grants from the U.S. (and perhaps other financing parties) via the ISTC or STCU. We define this as ″graduation″ from U.S. regular project funding. We will look to the ISTC and STCU to help us to implement this vision, but we will continue to work closely with individual institutes and the Science Centers to develop individual sustainability plans and a systematic approach to self-sustainability.

One self-sustainability component has been, and will continue to be, commercialization in its largest sense, meaning greater emphasis on national and international industrial partnerships to develop technologies and entities with market potential. Aspects of commercialization are already in place at the ISTC via its commercialization program know called Innovation Initiatives (formerly the Commercialization Support Program) and at STCU through the Targeted Research Initiatives. For both these commercialization initiatives, State has worked with and drawn from the Department of Energy's own commercialization efforts in the Initiatives for Proliferation Prevention program.

Regarding the GAO's recommendation to work with the Administrator of the National Nuclear Security Administration and the Secretary of Energy to develop a joint plan to better coordinate the efforts of DOE's Initiatives for Proliferation Prevention Program (IPP) and the ISTC's Innovation Initiatives, State concurs with the recommendation to more closely coordinate these program elements and will consult with DOE on implementing this recommendation. We expect that self-sustainability for many institutes will be achieved through contribution to host government peaceful priorities - leading to increased host government funding for the institutes.

In 2007, State led discussions on creating institute sustainability programs at both Centers. A presentation on the need to graduate institutes to self-sustainability was given to both Centers' at their fall Governing Board meetings in 2006, and the U.S. hosted a multilateral discussion with participants from both Centers and the funding parties on how to create and implement an institute sustainability program, as well as discussed what the measures for success would be. For FY2008, State has made it a priority to advance the Center's newly approved programs for institute financial self-sustainability and to contribute significant funding for these programs. For example, the U.S. has added a day of meetings to a routine Coordination

Executive Committee meeting this March in order to discuss how institute-specific sustainability plans at the ISTC will be implemented by the funding parties. Similar discussions will also be held at upcoming STCU meetings. In this spirit, State is working with the Centers to focus all remaining and additional activities on improving the financial self-sustainability of scientists and institutes.

EXIT STRATEGY

We have developed an exit strategy for leaving the scientists engaged and the institutions that employ them better prepared to sustain themselves in peaceful work. The ISTC and STCU are now major nonproliferation implementation platforms and complement other USG programs, including the U.S. Department of Energy's IPP and the U.S. Department of Defense's Cooperative Threat Reduction (CTR) program, and programs of other governments. These coordinated programs engage WMD or dual-use scientists in peaceful research and also design and fund services, training, and competency building to guide former Soviet WMD/missile and dual-use experts toward economic self-sustainability and a permanent transition to stable and peaceful civilian employment.

The Department of State seeks to ″graduate″ to financial self-sustainability approximately 20 former Soviet defense-related institutes across the biological, chemical, nuclear, and missile spectrum per year up to 2012. Also, our discussion on transformation of the Centers to address global nonproliferation goals is based on the need to position the Centers so that they may continue to sustain themselves in their important work as well as engage host states in global nonproliferation aid and activities without direct foreign aid from the U.S. and other funding parties. Further, by expanding the Partners Program, we hope to increase private investment in the Centers as State gradually reduces funding in order to redirect resources to other State programs which aim to address new and emerging global proliferation threats.

CHALLENGES

While the Science Centers program has been successful in many areas, State faces a challenge as we seek to strategically transform the two centers and our redirection efforts through those centers. Our current efforts are targeted at transforming the centers to focus on graduation and sustainability, joint nonproliferation and counterterrorism programs, greater financial responsibility on the part of host states, and working cooperatively to address the worldwide terrorist threat. State is working hard with all the stakeholders, partners, and funding countries to accomplish these goals.

CONCLUSION

We will continue to carefully review DCAA audit reports, taking special note of recurring problems, and will follow up with the Centers about those issues. Also, we will continue to ensure that 50% of scientists on a project have WMD expertise as a guideline for funding decisions. We are also working with the science advisors from the national labs to improve the effectiveness of our programs.

We believe that better cooperation and partnership on nonproliferation issues between all U.S. agencies redirecting expertise in the FSU, and specifically between Science Center parties, deepens the bonds between all constituent parties, thereby strengthening the shared nonproliferation mandate and contributing to global betterment as well.

As we continue to address proliferation concerns in Russia and the former Soviet Union (FSU), we also must address new and emerging proliferation threats in regions with high terrorist presence and/or activity through other threat reduction programs of the Department of State that address chemical, biological, radiological, and nuclear (CBRN) threats reduction worldwide.

Thank you.

Ms. SCHAKOWSKY. Thank you.

We will begin the questions now. Let me start with a few myself. Mr. Scheinman, Mr. Robinson asserted that the DOE disagreed with the recommendation to fundamentally reassess the IPP program. Is that accurate, and why would that be? It seems to me that in your opening statement that you talked about many things that

would I think add up to a kind of fundamental reassessment, so why wouldn't we start from the beginning and reassess this program?

Mr. SCHEINMAN. I think the answer is that we feel we have already conducted that fundamental assessment, or reassessment of the program, and it was done at the administrator's direction, and if I had to guess, if we were to expand the staff time to do it all again, I think we would come to the very same conclusion that we reached and that is supported in fact by many of the GAO recommendations, and that is the need to focus on the threat as we perceive it today and not necessarily as we saw it 15 years ago. The threat has clearly changed. I think our focus has to shift from addressing the risk of mass migration to a more focused approach and the focused approach is based on our analysis of risk. We are doing that, and in fact, we completed our——

Ms. SCHAKOWSKY. You went over many of those.

If I could ask Mr. Robinson, what about the kinds of changes that DOE has already expressed a willingness to do does not comply with this overall reassessment?

Mr. ROBINSON. Our understanding of the 2004 and 2006 assessments I think Mr. Scheinman is referring to is, it doesn't quite meet what we would be looking for in a sort of fundamental reassessment in that it doesn't get into a lot of specifics. The 2006 in particular seems to be kind of a loosely prepared set of observations, one of which, by the way, seems to conclude that there isn't a heck of a lot of accomplishment so far from the effort. But what we would be looking for is something——

Ms. SCHAKOWSKY. You are saying that DOE concluded that itself?

Mr. ROBINSON. Well, I mean, there is an observation in the document that says something to the effect of after 11 years of performance, we are not sure we have actually accomplished any——

Ms. SCHAKOWSKY. Anything?

Mr. ROBINSON. No hard evidence that GIPP or any other scientist engagement in the program has prevented the migration of even a single scientist. So, I mean, that is an observation that is incorporated in here but, you know, I wouldn't regard that as the definitive observation of this. As I mentioned, it is sort of a loose assemblage of information. Now, on the other end, from what we understand, DOE is now embarking upon a very precise reassessment of risk which is an outstanding idea. From that, I think we would be looking for them to translate that into, you know, specific institute-by-institute, person-by-person kind of assessment of whether these funds should continue to these locations, and then as we have emphasized in the past, how do you know when you are finished or is this an open-ended, never-ending insurance policy that is sort of broadly cast. So that is the kind of specificity that I think we may be somewhat disagreeing with.

Ms. SCHAKOWSKY. Thank you.

Mr. Scheinman, isn't it the case that the DOE program guidance requires 60 percent at minimum of the scientists have to be employed during the Soviet era? I mean, many of us have noted the fact that 54 percent of the scientists paid through the program have no experience with weapons of mass destruction. Sixty per-

cent of those audited had not been Soviet-era scientists. So, I mean, isn't this in noncompliance?

Mr. SCHEINMAN. Well, the guidance that is quoted is guidance. That is how we attempt to structure and to implement the program. I think our view is that the preponderance of individuals that are participants in all GIPP projects are those who have WMD background, either related directly to weapons or related to the underlying technologies, and I think what we have come to learn is that these programs really only work if we involve not just technologists who were born in the 1930s and the 1940s but younger scientists as well can help bring technologies to the marketplace.

Ms. SCHAKOWSKY. Thank you.

Let me now turn it over to our new ranking member, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Chairman. It is a great hearing. I appreciate your time.

Mr. Robinson, the methodology was basically, you followed the money, where the money was going, then you looked at the resumes or the background of the people who were receiving it. Is that correct?

Mr. ROBINSON. Our methodology was pretty wide-ranging and fairly intensive, but relative to the background issue, which I think is probably what you are referring to, the judgment that so many of these folks did not claim weapons background, what we did essentially was two-pronged. We asked the laboratories that oversee the projects to basically fill out an Excel spreadsheet for us on each one of the projects. We then supplemented that information with review of records that—DOE's records on payments and the like and so essentially we are using DOE's own information, either directly provided through an Excel spreadsheet presentation or our review of the payment records.

Mr. SHIMKUS. Great. Thank you.

Mr. Scheinman, you heard the opening statement where I went through the approximately $11 billion of U.S. payments for energy resources to Russia. In the Department of State program, they have asked for cost share or assistance by governments. Have you asked for that from the Russian government?

Mr. SCHEINMAN. I don't believe we have asked for that to this point but one of the outcomes from our assessment that was conducted at the request of the administrator was that we move precisely in that direction. And so as look to projects in fiscal year 2008, where incidentally we see a shared set of interests between what we want and what we think would be in Russia's national interest, which is nuclear safety, security and better safeguards that we can pursue that kind of cost sharing.

Mr. SHIMKUS. It is my understanding that assessment was done 2 years ago?

Mr. SCHEINMAN. The assessment was briefed to the administrator in I believe the fall of 2006.

Mr. SHIMKUS. So the question is, if that was the fall of 2006, we have already gone 1 year. Have you asked Russian participation financially in the program in the past year and couple months?

Mr. SCHEINMAN. I am not aware. I will have to——

Mr. SHIMKUS. Let me——

Mr. SCHEINMAN. I accept the point. It is time to do that. I would note that for the Nuclear Cities Initiative, at the time we were thinking about renegotiating the government-to-government agreement which lapsed and which we did not renew as part of our drawdown efforts. We did have in there that the condition of continuation with Russia would be cost sharing.

Mr. SHIMKUS. And Mr. Stratford, you mentioned in this line of questioning the self-sustaining aspect and that even though it is self-sustaining, there may be times to be of assisting. In the self-sustaining analysis, are private-sector entities part of this? In other words, it looks like GE and Ford are partners in some of the IPP out of the DOE. There is a lot of literature. Eastern Europe is kind of a hobby of mine, chairing the Baltic Caucus, following Belarus issues, democracy issues there, the Baltic countries. There is great movement by—there are great recent stories about IBM being a worldwide business company that is looking and hiring in St. Petersburg. A lot of U.S. multinational corporations are there. Is part of the self-sustaining aspect the private sector?

Mr. STRATFORD. Not nearly as much as DOE, and there is a reason for that, which is that we ask our Russian colleagues for examples to suggest projects that they can work on, and if we like it we agreed to fund it if we think the lab is the place that something needs to be funded. Now, those projects are supervised by people from the national laboratories——

Mr. SHIMKUS. Sir, let me just try to—I only have 45 seconds left and I want to get this last question in because it is really a question based upon our legislative responsibilities. Is there a question about the movement of these funds into Libya, the possible use of these funds into North Korea should there be changes, Iraq? Is there a the clear line of authorization with appropriations based upon the initial language? I think it is the DOE program I am talking about and I think your analysis says that we may need to effect legislative language to clarify that. Mr. Robinson, is that fair?

Mr. ROBINSON. I think that is a fair characterization. It would be far preferable to have a clear sense of congressional authorization to make this transfer and it is one of our recommendations that I think DOE concurs with.

Mr. SHIMKUS. And as authorizers, I think we as a committee would probably like to move in that direction.

My time is expired. Thank you, Madam Chairman.

Ms. SCHAKOWSKY. Mr. Walden.

Mr. WALDEN. Thank you, Madam Chair.

I want to see if I have got this right, Mr. Robinson. Did I hear you correctly say we have had 14 years, $300 million and haven't identified one scientist in Russia that we have kept from going out of Russia?

Mr. ROBINSON. What I was doing was quoting one of the documents that the DOE has prepared in doing their reassessment. It goes to the fuzzy nature of the program, that it is hard to specifically identify anybody that was prevented from doing something. That is correct.

Mr. WALDEN. And that half of the scientists of the 97 projects that were reviewed had no weapons background?

Mr. ROBINSON. Did not claim any weapons background in any of the documentation that either the DOE labs provided or in their own documentation submitted to DOE.

Mr. WALDEN. And then I guess things—you know, obviously this program was begun with the best of intentions. I mean, none of us wanted at the time of the collapse of the Soviet empire or Soviet Union to have these folks just go out to the highest bidder in the worst country in the planet, and so I mean, it started with good intentions. A lot has changed since then. And is the issue really now as much how they transfer information as their physical movements? In other words, we have supplied these institutes with fax machines and e-mail and computers they didn't have before, and we know from oversight hearings here on Los Alamos and everywhere else, even here we see secrets that are taken out of secure areas to non-secure areas. Is that happening as a result of—are we actually investing in the new technology that allows them to share without leaving?

Mr. ROBINSON. I can't speak to that specifically. I can say that the Russians are quite, you know, appreciative of the money that is provided because it has enabled them to recruit and retain a whole new class of Russian scientists that ultimately could do whatever down the road.

Mr. WALDEN. And isn't it true that Russia is engaged in nuclear commerce with Iran including shipping nuclear fuel to Iran?

Mr. ROBINSON. I believe that is publicly stated by Mr. Putin.

Mr. WALDEN. And so isn't it reasonable to assume that we are actually funding with money we are probably borrowing from China to give to Russia to train nuclear engineers to help Iran develop its nuclear energy?

Mr. ROBINSON. I don't think I have the evidence to either support or refute that specifically but I guess——

Mr. WALDEN. Can either of our other two witnesses tell me that is not happening with certainty?

Mr. STRATFORD. I don't think I would put it quite that way.

Mr. WALDEN. Well, I am sure you wouldn't but is it happening?

Mr. STRATFORD. Well, the answer to your first question is, yes, Russia is cooperating with Iran in the nuclear area. They have transferred the Bushier reactor and they are now in the process of transferring the fuel for that reactor and that does not necessarily make us happy but that is what they choose to do. Yes, you could argue that if you give Russia a dollar for whatever purpose, it frees up a dollar that can then be spent elsewhere whether it is a nuclear engineer going to Iran or for other portions of the Russian nuclear program. Yes, you could make that argument. But that having been said, do you want to try to close a proliferation risk. Now, State is not normally considered to be a program agency. If there was a consolidated program with all of these things together at DOE, I suspect we would not be clamoring for money to go to science centers. But somewhere 13 or 14 years ago, somebody made a decision that that was a good thing for State to do and having been handed that task and having been appropriated funds, we are going to do the best we can. That having been said, as I said, we do have an exit strategy. We would like to be out of this business by 2012 and have graduated all of these institutes.

I heard a line that are we trying to move money from Russia over to other threats. Yes, we are. The amount of money that we have asked for for the Science Center programs is declining. It is going to keep declining. Is the money going to go elsewhere? Yes, because we are putting more money into Iraq and we are putting more money into Libya.

Mr. WALDEN. Mr. Scheinman?

Mr. SCHEINMAN. If I may just add to that response, we certainly have—I don't think you were implying we have no evidence that any funding that we have provided to support scientist engagement has found its way into proliferation transactions, whether that involves information or direct support from Russia to another country, and if anyone does have that information, we would obviously be very interested in seeing it. We would make adjustments in accordance with it. I think the other half of my response would be that GIPP can be measured in hard objective and tangible ways but I think it can also be measured in terms of soft accomplishments, and among those accomplishments are working with Russia on preserving a security culture, hopefully improving the ethics of scientists who are involved in those programs, and I believe that through the access and the transparency that we have, we are making a difference, even if I can't count it on my fingers and toes.

Mr. WALDEN. I guess we are just trying to figure out this program created with the best of intentions to solve a very real threat continues on and I guess we get these GAO reports back, and it is hard to go home and defend handing out the money to Russia, especially when we are sending them a lot right now through oil payments and everything else, so their economy seems to have really turned around, a lot of domestic investment there, private sector.

Thank you, Mr. Chairman. My time has expired.

Mr. STUPAK. Thank you. Let me follow up along the lines of something Mr. Walden said about, we have this agreement with Russia but Russia has other bilateral agreements with other countries such as Iran to develop nuclear, so any agreement under the IPP program doesn't prevent Russia then from turning around and transferring technology or information to other countries such as Iran that they have an agreement with, is there? Mr. Scheinman?

Mr. SCHEINMAN. No, there is nothing to prevent Iran from doing that. There is really no relationship though, as I see it, between IPP projects and Russia's conduct except insofar as our engagement keeps Russia focused on nonproliferation projects.

Mr. STUPAK. Don't the agreements we have with them to work on certain commercial projects, can't that be a benefit not only to Russia but other countries that they may have a bilateral agreement with that we do not, that the United States does not?

Mr. SCHEINMAN. In theory, I suppose if we are working on nuclear energy-related——

Mr. STUPAK. Well, you have all these projects going on, I think about 35 of them, that are developing new things including reprocessing of fuel rods and which this country is concerned about because the last 3 percent of reprocessed rods is plutonium, weapons-grade plutonium. Isn't that a concern?

Mr. SCHEINMAN. If we were to transfer technology to Russia related to reprocessing spent fuel, a whole additional set of controls are built in as a result of—

Mr. STUPAK. Between United States and Russia, but not Russia and Iran.

Mr. SCHEINMAN. U.S. controls follow the technology that is either replicated or material that is used from technology provided. We do not provide that technology to Russia.

Mr. STUPAK. Well, the significance of the program, and as I said in my opening, I thought it served a valuable purpose. State said they are closing their program down by 2012. DOE continues to look for ways, it almost looks to like expand the program. I think it is a slush fund for the national labs. That is what I believe this program has turned into. But really, how is the program as currently administered going to help when Russian scientists in the IPP program receive about $35 a day? Is $35 a day enough incentive to keep Russia weapons of mass destruction from migrating to rogue states or to terrorist groups?

Mr. SCHEINMAN. Well, I think I can only answer that question with respect to the support that we do have from Russia to engage in these programs. They seem as interested in pursuing the cooperative arrangements in partnership with industry or with the national laboratories, so——

Mr. STUPAK. Well, therefore, shouldn't private labs or national labs or Russia take more responsibility? I mean, the program as it is currently outlined, $35 a day isn't going to keep anyone from doing anything.

Mr. SCHEINMAN. Sir, we do believe that the program should transition from one of assistance to partnership and that implies cost commitment from Russia, and that is the direction we hope to go.

Mr. STUPAK. Well, then why does the State Department, they are going to close theirs down by 2012, and why is DOE still funding, as I said, 35 projects at 17 institutes which the State Department has already graduated from the Science Centers program? It seems like you are just, I don't want to say duplication but State is winding it down, you are maintaining or expanding.

Mr. SCHEINMAN. I think we are focused on a different community of institutes through our work. The State Department has principally focused in recent years, certainly in the last year, on institutes that are evolving towards self-sustaining capacity whereas our programs have been focused on institutes that haven't reached that mark, so there is a community of institutes. We have been focused more on high-risk institutes that haven't perhaps enjoyed the economic recovery of others whereas the State Department has focused on institutes that are in better shape. I note that the State Department's list of high-risk institutes includes those that we are involved with, and as Mr. Stratford said in his set of remarks, the absence of a cooperative program doesn't imply no risk. There is still risk at a number of these institutes that are in a better economic position just by virtue of the technology and expertise that they possess.

Mr. STUPAK. But GAO also points out that these so-called institutes you are talking about, those scientists who worked in the Soviet era are gone. Now you are training new ones which really sort

of in a way creates proliferation, not nonproliferation. So do you want to comment on the last point about the 17 institutes which State has already graduated? Why shouldn't DOE be graduating institutes?

Mr. ROBINSON. Well, our clear position is that there needs to be some very specific criteria for graduation, that these things shouldn't go on into perpetuity, that if you are going to have an insurance policy, it shouldn't be so completely open-ended, protect against every possible risk that might come down the pike. We don't have enough money to do that in the world. So I think what we are looking for here is getting a very precise set of graduation criteria and then apply them while also focusing whatever program activities are conducted at the highest risk, the real risks of proliferation, not training, you know, new scientists to do other things.

Mr. STUPAK. Are you developing that criteria, specific criteria so you can graduate?

Mr. SCHEINMAN. Yes, we plan to do that in the coming year. As the GAO recommended, we plan to articulate and implement an exit strategy that includes that set of criteria and does provide us to wind down in Russia, which we have been doing.

Mr. STUPAK. OK, you say that. Let me show you tab 3. Do you have the binder? Would you hand it to Mr. Scheinman there, please? Do you have one in front of you? I think it is tab 3 on the table in front of you. It is the IPP program guidance dated 2002, which was transmitted to the committee last week, and turn to the area of page 78. It should be flagged there for your convenience. Because you say that and I am a little concerned because when I read it, and I am on page 78 here, and I think it is highlighted there for you, "IPP requires that a preponderance of the staff working on its projects have had weapons of mass destruction relevance experience before 1991. The meaning of preponderance is taken to be 60 percent as a bare minimum. Two-thirds would be better, and anything above that, better still." Then it says, "Add note for HQ. This needs to be changed to read 50 percent once the current GAO business is over. The dictionary definition for preponderance includes 50 and above but GAO is right, we should have changed this at the point when the practice was modified." Do you see that there, Mr. Scheinman?

Mr. SCHEINMAN. Yes.

Mr. STUPAK. So it looks like you are just going to change the text here just to get GAO off your back and you go back to what you want to do.

Mr. SCHEINMAN. That is an unfortunate——

Mr. STUPAK. But it accurately reflects the attitude at DOE; let us just say what we think we want them to hear, we will say what we think they want us to hear and then we will go back and do what we always did.

Mr. SCHEINMAN. No, sir, I don't believe that is correct, and I would refer you back to our assessment that was conducted at the request of NNSA Administrator Brooks where we outlined the requirement to change our focus to deal with the threat as we see it today and not the threat as we understood it to be 15 years ago, and among the recommendations in that report is that we develop an exit strategy and implement it, that we focus on the community

of institutes that might present risk and thereby change our focus in the metrics and performance process, instead of counting numbers of people, to count institutes where we understand risk to be, number 2, and number 3, to focus our work in areas that are more directly supportive of nonproliferation including safeguards, security and proliferation resistance. That is what we are about.

Mr. STUPAK. Well, there is skepticism because it seems like State is moving forward with this program that has outlived its usefulness where you guys are still not doing it. Let me ask you one more question and then Mr. Inslee showed up, I will turn to him. Nuclear cities—Russia shut down about 10 cities that had nuclear. You don't have any program in those 10 cities, do you?

Mr. SCHEINMAN. Russia didn't shut down the cities.

Mr. STUPAK. I didn't say shut down the cities. I said shut down the nuclear program in 10 cities, right?

Mr. SCHEINMAN. Well, no, nuclear programs continue in those cities.

Mr. STUPAK. But there are about 10 of them?

Mr. SCHEINMAN. There are 10——

Mr. STUPAK. Do you have programs going for those scientists in those cities?

Mr. SCHEINMAN. We do have a number of projects that involve those cities but the Nuclear Cities Initiative itself we decided to cancel in part because the focus of that program was frankly beyond our means to implement.

Mr. STUPAK. Well, the Nuclear Cities Initiative, you called it, right?

That was one program that came underneath the IPP. That one is sort of shut down so why can't this one be shut down?

Mr. SCHEINMAN. The focus of the Nuclear Cities Initiative was to deal with the risk of mass migration and to focus on jobs and defense conversion. Our view of the program following our assessment with the administrator was that that is not the way we need to conduct this program, that the risk is not mass migration, the risk is that proliferators whether they are countries or terrorist organizations are going to target specific institutes because of the technology that they possess, so our program therefore made—our objectives made less sense in the Nuclear Cities Initiative context and require adjustment in the IPP context where we are going to focus not on jobs and defense conversion but on promoting technology partnerships that promote our nonproliferation objectives.

Mr. STUPAK. Mr. Inslee for questions.

Mr. INSLEE. Thank you.

Mr. Scheinman, I am just looking at the—there is a program guidance requiring 60 percent at a minimum of scientists who have been employed during the Soviet era to be involved but I am advised that that hasn't been met. Could you comment on that?

Mr. SCHEINMAN. I believe we have engaged certainly more than 50 percent of former WMD scientists. I don't know that we have attained the goal of 60 percent, which is a goal we still hope to—we strive to meet.

Mr. INSLEE. I should—in fairness, it was a reference to a GAO audit of 97 IPP projects and they found fewer than half, I am advised.

Mr. SCHEINMAN. We don't agree with that number. Based on our records and our checks which we conducted again just after the—or as the report was coming forward, our review shows more than 50 percent of participants have WMD expertise.

Mr. INSLEE. And it is fair to say you are going to continue that effort to boost that, I hope?

Mr. SCHEINMAN. Correct. And I would just add, if I may, that based on the direction that I have recommended the program, promoting safeguards, security and related nonproliferation topics, the community of experts that we would draw from are more clearly related to WMD either expertise and technology or the enabling technologies. That is very much what we plan to do.

Mr. INSLEE. We encourage that. Thank you very much.

I yield back.

Mr. STUPAK. Mr. Walden, any further questions?

Mr. WALDEN. Thank you, Mr. Chairman, and I want to thank our witnesses and I want to thank the GAO.

You know, it seems like every year hundreds of scientists retire from our own weapons laboratories at Sandia National Lab, Los Alamos, Lawrence Livermore and the nuclear weapons scientists have vast and detailed knowledge regarding our weapons systems and capabilities. What do we do? What does the Department of Energy do to make sure that our own retired DOE weapons scientists aren't sharing their knowledge and what are we doing to recruit new people into this field so that we are keeping pace with technology?

Mr. SCHEINMAN. That is a good question. I think you will find that across the Department of Energy and its national laboratories, it is certainly my experience, and I have visited, I think, virtually every lab and site, that you will not find stronger patriots than those who have gone through our nuclear weapons programs and production facilities. That being said, every technology transfer, whether that is an e-mail or work that might be conducted for a foreign partner, has to run through a rigorous set of export controls and internal reviews, so I think we have been in pretty good shape, not to say that there hasn't been hardship in locations where facilities have closed down.

Mr. WALDEN. But my question was more about our retired scientists and I am not questioning their patriotism at all, but I am just saying, some people as we know, we have had intelligence experts in our various agencies that have been on the take and been busted but after years of damage to America's security; do we have a plan in place to kind of monitor our former nuclear scientists? I mean, we seem to have a lot of plans in place to deal with the Russians.

Mr. SCHEINMAN. If those programs and plans are in place, I am not aware of them. It would be another part of the Department of Energy that would take interest. But to answer the other half of your question, we certainly are struggling in the United States with respect to our own brain drain, not in terms of the transfer of information to other countries or organizations but just the mere fact that we have been out of the nuclear energy business so long that the associated infrastructure associated with nuclear power has attritioned and we need to rebuild it, and it is very much one

of our interests—an interest of my program is to build the next generation of safeguards and nonproliferation experts so that we can regenerate that level of expertise across our labs.

Mr. WALDEN. Mr. Robinson?

Mr. ROBINSON. Just to elaborate and expand upon that, this is a significant national issue. It is not just in the weapons side but in the nuclear power side if we are going to build, you know, a substantial number of new plants, the NRC side, and it is not just the scientists themselves. We have had consultation with a lot of folks in academia, and the availability of professors to teach the next generation of nuclear scientists is drastically diminished.

Mr. WALDEN. Good point.

Mr. ROBINSON. So it is actually slightly better than we might have otherwise imagined.

Mr. WALDEN. And while you have the microphone there, according to GAO testimony, the Department of Energy has wasted a significant portion of the IPP budget due to mismanagement. Now, we know at Los Alamos we have experienced countless security incidents that have compromised classified information and frankly put the Nation's security at risk. This oversight committee over the last few years has conducted both public and classified and closed hearings on this problem. Do you think that the money we wasted on the IPP program would be better spent on security improvements at Los Alamos where we know classified information is not always handled properly? Do I need to hold up my J-B Weld prop again?

Mr. ROBINSON. Mr. Walden, that is a tough question. The amount of money going into this program, the IPP program, is not huge. It is almost two different things. It is hard to know exactly, you know, how a transfer would——

Mr. WALDEN. Well, the question is somewhat rhetorical in its nature.

Mr. ROBINSON. OK. I took the bait unnecessarily then.

Mr. WALDEN. No, no, it has a serious piece to it as well, and that is——

Mr. ROBINSON. Well, no, as you well know——

Mr. WALDEN [continuing]. We keep an eye on Los Alamos and elsewhere and I think they have made improvements but——

Mr. ROBINSON. As you well know, we have done a vast amount of work and continue to do a vast amount of work on physical security at Los Alamos. We are doing a huge project right now on cyber security, given all the extensive problems that have been experienced. So our investment on that initiative is even much bigger than it is on this side of the house, frankly. We are working with you on that.

Mr. WALDEN. Thank you, Mr. Robinson, and gentlemen, thanks for your testimony.

Thank you, Mr. Chairman.

Mr. STUPAK. Mr. Robinson, that cyber security at Los Alamos, since we have had so many problems, that could be done at a different nuclear lab, right?

Mr. ROBINSON. I am sorry?

Mr. STUPAK. The work being done at Los Alamos on cyber security, that could be done at a different lab, could it not? One where

they have security? Well, we do three hearings a year on Los Alamos breach of security. Some of us think it has outlived its usefulness. Now, I will get myself in trouble and all my New Mexico friends will be calling me but——

Mr. ROBINSON. I was going to say, there are a great many folks in New Mexico on both sides——

Mr. STUPAK. Yes, there are.

Mr. ROBINSON [continuing]. That would object to any comment on that.

Mr. STUPAK. That is true. I won't put you on that position.

Ms. Schakowsky, questions, please.

Ms. SCHAKOWSKY. Just a couple of things. I do find it really troubling that one, there is no evidence that any one person could be identified, according to the DOE, Mr. Robinson, Mr. Scheinman, that actually was deterred from being in a situation that would put us at risk, and there is also no evidence, Mr. Scheinman, that it has, you said, increased proliferation, which means there is no—I don't know if that means and maybe you can answer me that no one has really looked at that. I mean, the whole thing seems to me that it has kind of been a little—there has been very little oversight, that it has developed a kind of life of its own. People have decided what its mission is from time to time and changed it or expanded it, and that measurements, you talk about soft things, well, that is all fine except that, you know, we are talking about a lot of money and I think that taxpayers and the Congress would like some metrics anyway that would say we know that this program is doing what it was intended to do. These are really more in the way of comments.

Let me just ask you this. The current budget now from DOE is what? Did you say it is down to 30 something?

Mr. SCHEINMAN. Roughly $30 million.

Ms. SCHAKOWSKY. Thirty million, and Mr. Stratford, on the State side. How much is that?

Mr. STRATFORD. For science centers for fiscal year 2008, we have asked for and will probably get $12 million total.

Ms. SCHAKOWSKY. And there are other agencies that are also funding certain aspects of this as well, I was told, even agriculture or there is other money involved in these programs. So, you know, a million here, a million there, it begins to add up, and I just feel like—I congratulate the committee and the GAO. I get this feeling that there are probably a lot of programs like this that have been around for a while and nobody is really looking at them, and the fact that the mission has changed and you want it to change pretty extensively regarding countries that are involved, I couldn't agree more with Mr. Shimkus, who said I think the Congress needs to—if we are going to change this mission, then we better get involved. Congress better get involved in deciding whether these resources are going to go, and also providing the oversight but you wanted to comment, Mr. Scheinman, go ahead.

Mr. SCHEINMAN. Well, I certainly take all of your points and I don't want to take issue with any of them. I would just—with respect to soft and hard metrics, my point was that only soft metrics count. That is clearly not the case. We need to have measurable

metrics that help guide our priority ranking, that help guide implementation, that——

Ms. SCHAKOWSKY. So in regard to the initial objective, are there any metrics that would indicate that this program has been a success?

Mr. SCHEINMAN. I think we can measure the success of the program through the level of engagement. I don't think we can measure success by absence of an activity. I think we do have information that these programs have made a difference in very real terms in terms of institutes perhaps working with us instead of with suspect partners. I would have to provide that information in another setting. But we do have the challenge of essentially——

Ms. SCHAKOWSKY. But wait. So you agree that there is—or maybe it was you, Mr. Stratford, that there is a relationship with Iran that is bilateral and has nothing to do with us, and isn't that in regard to the institutes?

Mr. STRATFORD. There is a relationship with Iran in terms of the Bushier reactor and the fuel for it. Remember, what we are trying to do is to get institutes to be self-sustaining, so our metric is simple: have we graduated institutes; have we stopped providing assistance to a particular institute?

Ms. SCHAKOWSKY. Yes, although you said that having said that earlier, that just because an institute has graduated doesn't mean that there aren't still risks and deserve U.S. dollar support.

Mr. STRATFORD. That is correct in certain instances. But even if we graduated every single institute, I still can't guarantee that two or three scientists from Institute X wouldn't decide that Iran was looking very promising as a place of employment. That can still happen. Now, if we thought that was going to happen, I suspect we would try to do something about it, and I don't know whether that would be another project at that institute or whether we would find some other way to address the problem. The problem doesn't go away. The question for us is, can we make most of it go away by reducing temptation and can we reduce temptation by having an institute be self-sustaining. We talk about Russia being richer. Yes, they are, but that doesn't mean that the government hasn't still cut loose some of its institutes and left them in a precarious position financially. The one other thing I would like to say is, what strikes me is that there are other countries who think that the science center idea is a good idea and are putting in money. Staff tells me that the annual budget of the Moscow Science Center is about $100 million. All U.S. contributions together are about $50 million of that. That means we are getting a one-to-one matching grant just like National Public Radio from other countries who have been putting in the money to do what we do. So is our $50 million leveraged? Yes, leveraged 100 percent because other people think this program is worthwhile. I will stop there.

Ms. SCHAKOWSKY. Thank you.

Mr. STUPAK. Well, that is at one institute. Let me follow up Ms. Schakowsky's question this way. Are the institutes being funded by DOE or State Department that are also working with Iran?

Mr. STRATFORD. I don't know the answer to that question. The science center in Moscow funds through projects a lot of institutes.

The question you are asking is, are any of those who are getting U.S. dollars participating in the Iran nuclear program?

Mr. STUPAK. Right.

Mr. STRATFORD. I don't know the answer to that.

Mr. STUPAK. Wouldn't we want to know that? How do you know that the purpose and intent is what we except it to be than if we don't know where they are working outside of cooperative agreement with the United States?

Mr. STRATFORD. Well, we do know basically what goes on between Russia and Iran, and I would have to check whether any of the institutes that receive project funding from us are connected with Bushier or fuel supply.

Mr. STUPAK. Would you do that?

Mr. STRATFORD. That is a possibility but I don't know the answer to it but I would be happy to try to provide that for the record.

Mr. STUPAK. How about you, Mr. Scheinman? Are there any DOE institutes working with——

Mr. SCHEINMAN. I am not aware of work that we are conducting that supports the Bushier fuel supply. We also, with the State Department and the entire U.S. interagency, obviously are looking very closely at potential relationships between Russia and Iran and we would gauge our decisions on projects based on what we know, but I would have to go back and see whether our work involves any of the institutes involved in the fuel transfer, the reactor.

Mr. STUPAK. OK. Well, we would like to have those answers because I was going to ask this question but based on these answers, you know, DOE funded a Lawrence Livermore study of 605 Russian scientists to address the brain drain. Now, that was back in 2002, but 21 percent of those scientists said they would go to rogue states such as North Korea, Iran, Syria or Iraq if the project involved significant scientific interest and the compensation was adequate. Well, if we are funding institutes and we don't know if Russia then has a separate agreement from those institutes we are putting money into with countries like Iran, Korea or Syria, that would be a cause of concern. And even though if you said well, we will give you money, you can come work elsewhere, the Russian scientists, 15 percent of them said they are still willing to go to rogue states for compensation or for the scientific challenge. In fact, 70 percent said their preferred place is Germany, of all places.

Let me ask you this question, Mr. Scheinman. Isn't it the case that DOE's Initiative for Proliferation Prevention is funding six projects under the Global Nuclear Energy Partnership, or GNEP, a DOE program to repossess, and I mentioned earlier, spent nuclear fuel and develop fast reactors?

Mr. SCHEINMAN. Yes, we do have a number of projects that are supportive of the general purposes associated with GNEP.

Mr. STUPAK. All right. Did DOE suspend part of its guidance that requires an industry partner to participate—you are talking about a one-to-one match, Mr. Stratford was, but industry partnership participation which is intended to ensure the commercial application of the projects, correct?

Mr. SCHEINMAN. The requirement in our guidance for industry partnership is associated with commercial projects. All of our projects are——

Mr. STUPAK. So GNEP, there has to be a private industry to show some potential for commercial application.

Mr. SCHEINMAN. I think the level of technology at this stage is only of interest to scientists and engineers. It is not at the point of being of interest to the commercial market.

Mr. STUPAK. Right. So why are you funding it then? If it is supposed to be with a commercial partner, why are you funding six of them when it is not commerciable and you can't have a—and there isn't a private partner who will even go along with you and it is also the conclusion of the National Academy of Sciences, they issued a recent report saying you are funding these six programs that have no commercial application, long time coming, why are you funding these programs when it won't be commercialized any time soon.

Mr. SCHEINMAN. I believe one project does in fact have a commercial partner but the reason that we are pursuing this work is associated with my earlier comment about focusing our program on nonproliferation topics that are of interest to the United States and hopefully of interest to Russia and that includes the development of a proliferation-resistant fuel cycle which will move us away from the current practice which Russia now practices which is to separate plutonium from spent fuel in pure form directly usable in weapons, encourage them over time to transition to a system that doesn't separate that plutonium in a pure form.

Mr. STUPAK. Well, is it the Secretary's responsibility, in this case Secretary Bodman, to determine whether or not projects carried out under IPP are likely to achieve their commercial objectives?

Mr. SCHEINMAN. Yes, per the law, I believe, the commercial potential is——

Mr. STUPAK. There is the point. The law says they are supposed to have commercial potential. You say one out of six might, so why are we funding the other five contrary to the law?

Mr. SCHEINMAN. At least my understanding is that projects that are approved for the purpose of being commercialized require an industry partner. Not all of our projects are approved for the purpose of commercialization. They are approved for the purpose of pursuing basic or perhaps applied research that we don't plan to pursue as a commercialization——

Mr. STUPAK. So then why are we doing it under the IPP program then? Why don't we just do it underneath our national labs? Why are you using this program for something that the law says it can't be done for? Why would you go there with it?

Mr. SCHEINMAN. Well, I don't——

Mr. STUPAK. Is it just in the interests of the Secretary or——

Mr. SCHEINMAN. No, sir, this is—our position is that the Global Nuclear Energy Partnership is one that we should support. It is the Administration's policy, and we have made those decisions internal to our own management certainly with briefings to senior management.

Mr. STUPAK. Yes, right, but isn't it supposed to—the programs you want to run are supposed to be under Congress authorization, isn't it, not what you think might be a good idea? The GNEP program, unless it has commercial application, hasn't been approved by Congress.

Mr. SCHEINMAN. Well, I think you can look at GNEP in perhaps in two ways. One is——

Mr. STUPAK. Yes, I look at it underneath the law and not where you want to go with.

In fact, Mr. Robinson, isn't that one of the weaknesses you pointed out in your report?

Mr. ROBINSON. Yes, our main issue with this is that it feels a little bit like mission creep, you know, and we have recommended that the relationship between GNEP and IPP be clarified and I think DOE is embarking upon undoing that, but it is the mission creep. What is the—we move the program into infinity and that is what is our issue is. We think, you know, this ought to be clarified.

Mr. STUPAK. Do you want to comment on that at all?

Mr. LEVIS. No, only to the extent what Bob Robinson says. We agree. We raised these questions about what authorization do you have to move the program in this direction, what guidance do you have, are there industry partners. These are the questions that you are raising today. We had the same questions.

Mr. STUPAK. And as I said in my opening, I am not necessarily—I think this program is a valuable program but I think it has to be within the confines of what Congress has authorized and how we spend money and how the programs are being run. I mean, maybe we shouldn't have an IPP program anymore. Maybe it should be a different program for nuclear research or reestablishing the nuclear base and technology and teaching in this country with the goal of nonproliferation. Maybe that is a more sensible way to go, at least underneath the authorization of Congress when we are spending $40 to $50 million a year.

Let me ask you one more question if I can, Mr. Scheinman. Turn to tab 13 in the binder, please. This is a December 15, 2006, joint letter from Secretary Bodman and Director Carichenko directed to President Bush and President Bush and it is attached to a U.S.-Russian plan of action for implementing GNEP, the global nuclear program there. Is this agreement non-public or is it a public document?

Mr. SCHEINMAN. This is currently a non-public document. My understanding is that the office that directed it within the Department of Energy has committed to the Russians that we would seek their agreement before releasing it.

Mr. STUPAK. Right. So before we can release this document, we need the Russians to agree with us, right?

Mr. SCHEINMAN. That is my understanding from the sponsoring office.

Mr. STUPAK. Since this is a government-to-government agreement between the United States and Russia, why is it that Russia determines whether the U.S. government's action plan to develop GNEP should be kept a secret from the American people? It is government to government. Wouldn't the government make its own decision?

Mr. SCHEINMAN. I don't think I would term this a government-to-government agreement in the classical sense.

Mr. STUPAK. Well, it is President Bush to President Putin.

Mr. SCHEINMAN. Yes, it is a joint report of ministers to two presidents. I believe the report could be treated as confidential foreign

government information which I think by its own rules and requirements would provide that Russia would have to agree to its release. As I say, I am happy to take this back to the sponsoring office and——

Mr. STUPAK. Sure. I mean, the assistant secretary for nuclear energy or U.S. Department of Energy signed it and his Russian counterpart did, but transparency is a cornerstone to the U.S. nuclear program policy with respect to civilian use of nuclear energy so I don't know how keeping it secret would build the public trust in DOE's plans for GNEP, so we are not going to make it public right now but I want to make it very clear that we come back and give us an answer to contact the Russian signatories so we can have public release of this document. We think it is critically important, especially with the GNEP program and the questions I have been asking you.

One more question. A couple years ago, I am still waiting for an answer, Secretary Bodman on spent fuels—you know, this country doesn't do it. We are probably about the only one that doesn't do it. We have problems at Yucca Mountain with storage and all this other. I asked him to revisit that policy. Has he ever made any recommendations to President Bush to revisit, overturn that policy? That policy has been in place since the Carter years. Technology has progressed so much. I think it is one of those things we ought to look at. Would you please take that message back and see if we can get some answers?

Mr. SCHEINMAN. I can tell you that it is being looked it very actively.

Mr. STUPAK. Good. I just hate to have all those years of advocacy go down the drain.

I guess that concludes it. I thank all of our witnesses for coming today. Sorry I was out for a bit. I was doing some work on the Great Lakes so I had to go testify. I am glad to be back. Thank you all. Good testimony, interesting issue. We will back with further hearings on this subject. Mr. Scheinman, Mr. Stratford, Mr. Robinson, Mr. Levis, thank you very much for your time.

That concludes our questioning. I want to thank all of our witnesses for coming today and your testimony. I ask for unanimous consent that the hearing record will remain open for 30 days for additional questions for the record. Without objection, the record will remain open. I ask unanimous consent that contents of our document binder with the exception of tab 13, the one I just questioned on, with the exception of tab 13, all of the rest of them will be entered into the record. Subcommittee staff will work with the Department of Energy to find an acceptable copy of tab 13 to enter into the record. Without objection, the documents will be placed in the record.

[The information appears at the conclusion of the hearing:]

Mr. STUPAK. That concludes our hearing, and without objection, this meeting of the subcommittee is adjourned.

[Whereupon, at 11:35 a.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

GIPP STATUS REPORT, MARCH 25, 2008

INTERIM STEPS TAKEN

•Placed on hold projects underway at institutes having involvement in Iran's nuclear programs; final decisions to be taken following completion of Energy/State Terms of Reference.
•Cancelled 2 projects at one institute of concern.
•Placed on hold two projects that involve Russia and proliferation-resistance of the fuel cycle.
•Met with U.S. interagency to discuss path forward for GIPP and State redirection programs.
•Outcome: State/Energy to update Terms of Reference for project reviews to ensure consistent application by IPP and ISTC. Aim is for interagency consensus on TOR within a month.
•Briefed HECC staff on results of classified assessments in response to Committee questions.

PROPOSED PATH FORWARD (SUBJECT TO CONSULTATIONS WITH STAKEHOLDERS)

•Continue R/FSU projects that involve high-risk institutes.
•Complete next phase of institute risk assessment to inform future programmatic decisions.
•Gain Russian agreement over next several months on approach to cost-sharing.
•Wind-down projects by end of FY 2010 that include no institutes rated as ″high risk.″
•Keep option of continuing projects at lower-risk institutes when needed to gain participation by high-risk institutes
•Determine role of industry under a cost-sharing model.
•Continue programs in Iraq and Libya (do not expect to carry forward with Libya beyond 2011).
•Maintain readiness to support projects in North Korea.
•Pursue nonproliferation technology projects outside of IPP; shift 2 existing advanced safeguards projects from GIPP to NA-242's International Safeguards and Engagement Program.
•Attain intra-Departmental and interagency agreement on approach to advanced fuel cycle projects; cost-sharing could be a condition of IPP support for approved projects in this area.
•Shift cost savings to Safeguards/North Korea denuclearization tasks.

INTERIM FINDINGS REGARDING RUSSIA AND IRAN:

•The HECC raised concerns over IPP work at certain institutes. We have looked closely at these projects and have reached the following conclusions:
•No payments were made to individuals at institutes under sanctions by the US Government.
•No evidence of U.S. funds or technology supporting Iranian nuclear projects.
•IPP has funded projects at institutes that have conducted work in Iran, though in some cases the reporting was acquired after the IPP projects were complete.

EXHIBIT BINDER INDEX

INITIATIVES FOR PROLIFERATION PREVENTION ORGANIZATIONAL MATERIALS

1. Initiatives for Proliferation Prevention (IPP) Organizational Chart
2. IPP Mission and Program Description
3. IPP General Program Guidance, March 2002
4. List of 35 Projects Funded by DOE at the Same Institutes Which Had Been ″Graduated″ by the State Dept. Program in the Current or Previous Fiscal Years
5. List of Current IPP Projects
6. Global Initiatives for Proliferation Prevention—Global Nuclear Energy Partnership Projects

NONPROLIFERATION STATUTES

7. National Defense Authorization Act for FY2000: Public Law 106-65, Section 3136—Nonproliferation Initiatives and Activities
8. FY94 Foreign Operations Appropriations Act: Public Law 103-87, Section 575—Ukraine/Russia Stabilization Partnerships
9. Atomic Energy Act, Section 123

GOVERNMENT ACCOUNTABILITY OFFICE REPORTS AND CORRESPONDENCE

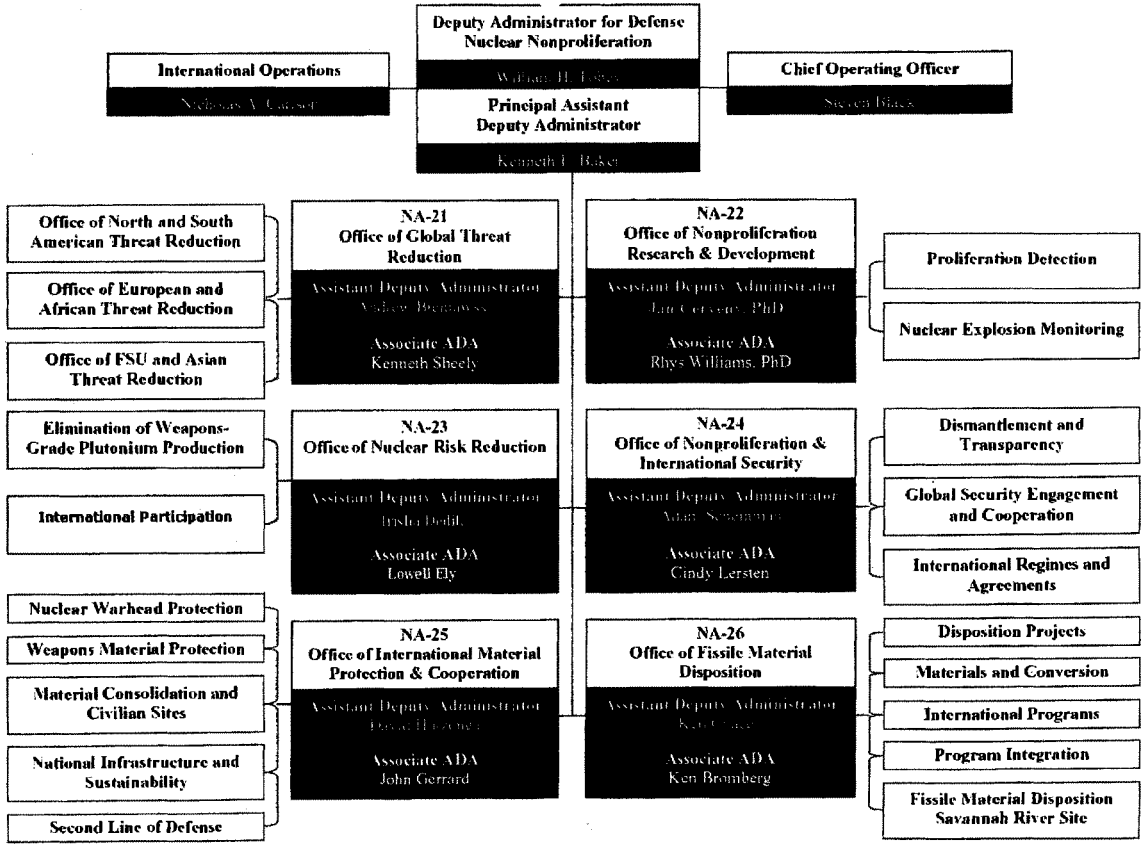
10. ″Nuclear Nonproliferation: Concerns with DOE's Efforts to Reduce the Risks Posed by Russia's Unemployed Weapons Scientist.″ GAO/RCED-99-54. (Executive Summary and Contents only, the full document can be found in the Subcommittee's Files.), February 1999
11. GAO engagement letter to DOE Secretary Bodman, re: researching IPP program for December 2007 report, 10/11/2006
12. ″Nuclear Nonproliferation: DOE's Program to Assist Weapons Scientists in Russia and Other Countries Needs to be Reassessed.″ GAO-08-189. (GAO Findings and Contents only, the full document can be found in the Subcommittee's files.), December 2007

U.S.-RUSSIA AGREEMENT

13. Transmittal of the Report of the United States and Russian Federation Joint Working Group on the Development of a Bilateral Action Plan to Enhance Global and Bilateral Nuclear Energy Cooperation, 12/15/06

NEWS ARTICLES

14. Global Security Newswire article by Jon Fox, ″GAO Lashes U.S. Nonproliferation Program.″ 01/14/08
15. Nezavisimaya Gazeta (Russian) unattributed editorial: Assistance from the United States Arrived to Wrong Scientists. Washington is Ready to Turn its Back on Russian Closed Towns.″ 01/17/08


Deputy Administrator for Defense Nuclear Nonproliferation
Principal Assistant Deputy Administrator
Kenneth I. Baker
International Operations
Chief Operating Officer
NA-21 Office of Global Threat Reduction
Assistant Deputy Administrator
Associate ADA
Kenneth Sheely
NA-22 Office of Nonproliferation Research & Development
Assistant Deputy Administrator
Associate ADA
Rhys Williams, PhD
NA-23 Office of Nuclear Risk Reduction
Assistant Deputy Administrator
Associate ADA
Lowell Ely
NA-24 Office of Nonproliferation & International Security
Assistant Deputy Administrator
Associate ADA
Cindy Lersten
NA-25 Office of International Material Protection & Cooperation
Assistant Deputy Administrator
Associate ADA
John Gerrard
NA-26 Office of Fissile Material Disposition
Assistant Deputy Administrator
Associate ADA
Ken Bromberg
Office of North and South American Threat Reduction
Office of European and African Threat Reduction
Office of FSU and Asian Threat Reduction
Elimination of Weapons-Grade Plutonium Production
International Participation
Nuclear Warhead Protection
Weapons Material Protection
Material Consolidation and Civilian Sites
National Infrastructure and Sustainability
Second Line of Defense
Proliferation Detection
Nuclear Explosion Monitoring
Dismantlement and Transparency
Global Security Engagement and Cooperation
International Regimes and Agreements
Disposition Projects
Materials and Conversion
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Program Integration
Fissile Material Disposition Savannah River Site

The Office of Defense Nuclear Nonproliferation
National Nuclear Security Administration

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NNSA National Nuclear Security Administration

IPP Initiatives for Proliferation Prevention
National Nuclear Security Administration

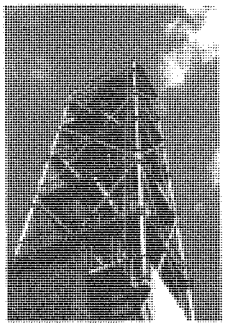
The IPP Mission

Initiatives for Proliferation Prevention (IPP) is a nonproliferation program of the U.S. Department of Energy/National Nuclear Security Administration. IPP enhances U.S. national security by engaging former Soviet WMD scientists, engineers, and technicians to redirect their expertise to peaceful work through partnerships with U.S. commercial enterprises. Through cooperative projects among former Soviet weapons scientists, U.S. national laboratories and U.S. industry, IPP identifies non-military, commercial applications for former Soviet institute technologies. These unique partnerships provide new resources and markets for U.S. companies, while establishing important private sector linkages for former Soviet weapons scientists.

IPP was established in 1994 under Public Law 103-87, Section 574, and is funded each year by congressional appropriation. Funding for FY 2005 is $23.7 million.

IPP Program Rationale

Since the break-up of the Soviet Union, thousands of weapons scientists, engineers and technicians have been subject to sharp government funding cutbacks at their research institutes. IPP engages these weapons personnel in R&D and commercial pursuits that may lead to stable, civilian employment opportunities, thus reducing the risk of proliferation of WMD technology and expertise.



CO distillation column for producing ^{13}CO. The column is a prominent landmark on the territory of the Russian Research Center - KurchatCO distillation column for producing ^{13}CO. The column is a prominent landmark on the territory of the Russian Research Center -

The IPP program has evolved since 1994, moving from support of primarily R&D initiatives to active promotion of

commercially-viable technologies. At present, over 130 projects, virtually all involving U.S. industry partners, are under way at 100 institutes and production facilities in Russia, Ukraine, Kazakhstan, Armenia, and Georgia. IPP has active projects at nuclear facilities, both inside and outside Russia's closed nuclear cities, as well as at biological, chemical and strategic delivery systems institutes.

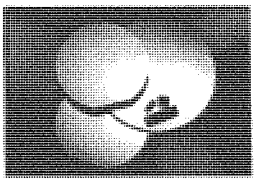
Kurchatov Institute in Moscow and was constructed as part of an IPP project involving Spectra Gases of New Jersey and the Lawrence Livermore National Laboratory.

Examples of Technologies Commercialized Under IPP

- improved prosthetic designs
- bioremediation of oil fields
- heavy metals recycling
- needle-free injectors for mass immunizations, including responses to acts of bio-terrorism
- nanophase ceramic fibers for diverse applications
- radioscopes for medical applications.
- radar technology to map coal, oil and gas deposits

How IPP Works

IPP is a proven model for technology commercialization involving partnerships among U.S. industry, DOE national laboratories, and former Soviet scientific institutes.



Isotopically-pure silicon wafer manufactured by Krasnoyarsk-45 in Zelenogorsk will meet needs of global microelectronics industry. IPP partners are Isonics Corporation of Colorado and Lawrence Berkeley National Laboratory.

The majority of IPP funding supports project work by the former Soviet institute, with a smaller percentage of IPP funds going to the U.S. national laboratory for critical technical oversight and project management.
U.S. industry partners are required to match IPP funding at least dollar-for-dollar with cash or in-kind contributions. U.S. industry partners are involved in project planning from the start to ensure a commercial focus. All companies participating in IPP are members of the U.S. Industry Coalition (USIC), a non-profit association, which serves as the technology commercialization agent for IPP and which offers numerous project-related services to members.

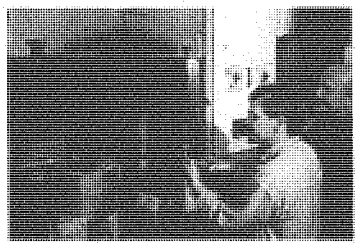
IPP complements its efforts by seeking co-funding opportunities and by coordinating its activities with other DOE/NNSA nonproliferation programs,

and with the U.S. Government interagency community.

Benefits to U.S. Industry

- Access to new sources of technology
- Reduced technical risk due to oversight and technology validation by the U.S. national laboratories
- Reduced political risk because all IPP projects are approved by both the U.S. Government and by the Government of Russia, Ukraine, or Kazakhstan, as appropriate
- Clear allocations of intellectual property rights

Major Accomplishments to Date



Metallicum LLC Scientist and Russian Scientist Removing Nanostructured Titanium from Press at Institute of Physics of Advanced Materials at Ufa State Aviation Technical University.

- 16,000 scientists, engineers, and technicians at 180 institutes across the FSU engaged
- 7,400 FSU scientists and engineers currently engaged in IPP projects.
- $195 million in private sector matches from U.S. industry
- 30 technologies commercialized and/or received venture capital since 1999 with $40 million in commercial sales and other value-added to U.S. industry partners and FSU scientists
- $119 million in private venture capital in support of IPP projects
- 2300+ new high tech jobs created in Russia, Kazakhstan, and Ukraine as a result of IPP projects
- In ideal conditions, an average of 5 - 8 years is needed to bring a new technology to market in the U.S. The early successes of IPP's commercialization projects illustrate the significance of the program's accomplishments in high technology development, working in an uncertain environment

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Initiatives for Proliferation Prevention

General Program Guidance

United States Department of Energy
National Nuclear Security Administration
Office of Defense Nuclear Nonproliferation

March 2002

General Program Guidance
Initiatives for Proliferation Prevention

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Foreword

This General Program Guidance replaces the Program Guidance dated July 1998. The entire document will continue to be reviewed and revised periodically to reflect operational experience and new requirements. Changes to specific topics may be made as required. Changes must be coordinated with and approved by the Director of the Initiatives for Proliferation Prevention (IPP), Department of Energy (DOE)/National Nuclear Security Administration (NNSA).

As a general purpose document, these instructions cannot predict all possible circumstances and contingencies faced by IPP program participants. If necessary, exceptions to these policies and procedures will be considered on a case-by-case basis. Such requests should be made to the IPP Director.

Guidance and Applicability

This General Program Guidance applies to all participants in the IPP program. Participants include DOE/NNSA Headquarters, DOE Operations and Field Offices, the participating National Laboratories, participating New Independent States (NIS) Institutes and U.S. Industry Partners.

This guidance document is not intended to supersede or modify DOE orders or existing contracts between DOE and its National Laboratories.

Program Overview

The Initiatives for Proliferation Prevention (IPP) program is a U.S. DOE/NNSA national security program whose mission is to reduce the threat of weapons of mass destruction proliferation. It strives to stabilize institutes, personnel and technology formerly dedicated to developing and manufacturing weapons of mass destruction in the successor states of the former Soviet Union (FSU). The program addresses proliferation risks through laboratory-to-laboratory cooperative research and development projects in the FSU and commercial technology development projects involving partners from U.S. industry.

IPP projects support weapons scientists and institutes in the NIS that are suffering economically, through joint collaboration on non-defense related research and employment in support of U.S. nonproliferation objectives. These projects identify technologies for commercialization that have market potential for profit both to the U.S. and NIS. Partnerships are formed by U.S. National Laboratories between U.S. Industry (the Industry Partner) and NIS Institutes, with the expectation that profitable IPP-commercialized projects will facilitate economic development in the NIS.

The IPP program supports both "Thrust 1" (T-1) and "Thrust 2" (T-2) projects. T-1s are of a relatively modest size (and number) and are intended to facilitate quick engagement of key NIS Institutes with which IPP has not previously worked. T-1s involve an NIS Institute and U.S. National Laboratory, which work together to demonstrate the feasibility of an NIS Institute technology, thereby establishing working contacts and evaluating the scientific and engineering capabilities of the NIS Institute. While not directly involving a U.S. Industry Partner, T-1s must

have good commercial potential in order to attract an Industry Partner, if successful.

T-2s, the mainstay of the IPP program, involve applied technologies and are intended to quickly bring to market a product, process or service based on an NIS Institute technology. T-2s are larger scale projects and involve an NIS Institute(s), U.S. National Laboratory(s), and U.S. Industry Partner(s).

1. Scope and Purpose

IPP was established pursuant to Section 575 of the Fiscal Year 1994 Foreign Operations Appropriations Act (Section 575). The intent of Section 575 is that the IPP program provide mutual benefits to both the U.S. and the participating NIS countries. Mutual and long-term economic benefits result from redirecting scientists/engineers in NIS institutes from military activities to commercial activities, while helping to ensure the nonproliferation of weapons of mass destruction.

General Guidelines:

1. The primary goal of the IPP Program is nonproliferation of weapons of mass destruction through the use of a commercialization mechanism. While commercial benefit is a major emphasis of the IPP program, the nonproliferation goals of the IPP provide the foundation for all program activities and thus take precedence over other considerations.

2. Money specified to support individual IPP projects may not be spent for other purposes.

3. Money specified to support an individual project may not be spent on any other project.

4. Intellectual property rights between participating parties are delineated in DOE's Class Patent Waiver No. W(C) 94-010.

5. Project agreements between participants must be consistent with other agreements between the U.S. and the NIS country, with other U.S. Government programs and U.S. national security policy.

6. Activities must be of economic value to both the U.S. and the participating NIS country.

7. All parties will protect designated proprietary information of the other parties.

2. Program Impact at DOE National Laboratories

Each National Laboratory Director, through the Inter-Laboratory Board Representative (see Section 3), must ensure that the laboratory participation in IPP projects is appropriate.

General Guidelines:

1. The participating National Laboratory's role in each IPP project must be complementary to, and not interfere with, other DOE-assigned laboratory roles and missions.

2. National Laboratory participation in a given project should be evaluated in terms of the best use of available laboratory resources and capabilities.

3. The impact of developing a project proposal and initiating project work should be considered in the context of how it will affect other DOE programs.

4. Each National Laboratory Director, through the Inter-Laboratory Board Representative (see Section 3), is responsible for reviewing project proposals to avoid redundancy, ensure consistency and compliance with the General Program Guidance.

5. Each National Laboratory Director, through the Inter-Laboratory Board Representative (see Section 3), is responsible for determining whether developing a project proposal or initiating project activities is in the best interest of the National Laboratory and is a suitable use of laboratory resources.

3. Inter-Laboratory Board

The mission of the Inter-Laboratory Board (ILAB) is to coordinate, review, and facilitate the activities of the ten participating multi-program laboratories and the Kansas City Plant with the other program participants, and to provide recommendations to DOE/NNSA Headquarters on the execution of the IPP Program. ILAB is responsible for reporting activities to the Director of the IPP program.

General Guidelines:

1. ILAB operating and administrative procedures are to be developed in accordance with this guidance document.

2. ILAB membership consists of one representative from each participating National Laboratory. Each laboratory operates under separate management and operating contracts with DOE and supports DOE's policies and procedures. Currently, participating laboratories are: Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering and Environmental Laboratory, Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, the Oak Ridge Site (which includes the Y-12 National Security Complex, the Oak Ridge National Laboratory, and the East Tennessee Technology Park), Pacific Northwest National Laboratory, Sandia National Laboratories and the Kansas City Plant. An ILAB representative must be a regular, full-time employee of the national laboratory (or KCP) represented. ILAB members elect a chairperson for a two-year period to coordinate the various functions of the ILAB.

3. ILAB acts as the point of coordination for the IPP program on major issues and activities involving the participating laboratories.

4. ILAB responsibilities include:

- Developing project proposals which reflect the operational goals of the program as

indicated by the IPP Director, and which meet the requirements outlined in the General Program Guidance.

- Implementing approved projects in a timely and efficient manner.
- Monitoring projects throughout their life cycle and taking any corrective action, to include project termination, in order to maintain project and program integrity.
- Developing strategies and activities to fulfill the commercialization objectives of completed and ongoing IPP projects. Particular emphasis should be placed on developing commercial strategies for IPP projects.
- Meeting regularly, at least annually, to discuss program progress and policies as a group.
- Providing timely reports to DOE/NNSA Headquarters regarding the identification of any problem areas, major accomplishments, project milestones, commercialization, financial information and performance.
- Maintaining, no less frequently than on a monthly basis, the Lotus Notes IPP Information System databases.
- Ensuring that the monitoring and reporting activities neither inhibit the laboratory contracting activities under other mission programs, nor interfere with the administration of the laboratory contracts by the responsible DOE/NNSA contracting officers.
- During proposal development, identifying and protecting the background intellectual property of potential participants.
- Providing regular reports to IPP U.S. Industry Partners concerning the status of active IPP projects in which the Industry Partner is involved.
- ILAB will provide information concerning the results of Thrust I projects to, and enter into discussions with, prospective IPP Industry Partners. ILAB also will furnish the results of T-1 projects to the United States Industry Coalition (see Section 4).

5. ILAB is responsible for generating any additional operational instructions necessary for implementing IPP program objectives. All such instructions should complement the General Program Guidance and are subject to approval by the Director of the IPP Program. Whenever practical, such instructions will be included in the General Program Guidance.

4. United States Industry Coalition

1. The United States Industry Coalition (USIC) is responsible for facilitating commercial interactions between U.S. Industry and NIS Institutes and for implementing the commercial development functions of the IPP program. In order to achieve these goals, USIC will work both

within the IPP project development structure and external to ILAB activities. USIC's primary responsibilities include:

- Assisting member companies in the commercialization of IPP projects by providing related advice and services;
- Independently evaluating the commercial viability of proposed project activities;
- Facilitating the development of T-1 and T-2 projects;
- Facilitating commercial activities between U.S. companies and NIS institutes outside of the IPP project development process;
- Providing timely reports and the results of any commercial evaluations to DOE/NNSA and ILAB.

2. National Laboratories retain the primary responsibility for developing projects. USIC will work with ILAB representatives to identify potential industrial participants. USIC will maintain a profile of specific industry needs in order to identify technology of interest to industry and bring such technological developments or capabilities to the attention of prospective industrial collaborators.

3. USIC and ILAB will maintain a fully transparent relationship. Each party will have full and complete access to reports, reviews or evaluations produced by the other party. USIC will provide copies of commercial evaluations to the ILAB Chairman for distribution to ILAB Representatives. ILAB will make technical review results available to the USIC.

4. USIC may facilitate non-IPP-funded commercial interactions between the industry and the National Laboratories or other U.S. government funded research entities as desired, as long as such activities do not interfere with other IPP-funded activities.

5. USIC will perform outreach activities, as appropriate.

6. IPP-funded activities at USIC must be approved by the IPP Program Director.

5. NIS Institute Weapons Scientists, Engineers and Technicians

General Guidance (Reference Section 3136, Title XXXI, DOE National Security Authorization for FY 2000):

No IPP funding may be used to increase or otherwise supplement the pay or benefits of an NIS

scientist or engineer if the scientist or engineer is currently engaged in activities directly related to the design, development, production, or testing of chemical or biological weapons or a missile system to deliver such weapons. No IPP funding may be made available to an NIS institute currently engaged in activities directly related to the design, development, production, or testing of chemical or biological weapons or a missile system to deliver such weapons. Nor may IPP funding be made available to any NIS scientist, engineer, or institute if that individual or institute has made a scientific or business contact in any way associated with or related to weapons of mass destruction with a representative of a country of proliferation concern. For the purposes of this guidance, a country of proliferation concern means any country so designated by the U.S. Central Intelligence Agency.

Specific Guidance:

1. Nuclear

Preface: The continued existence of Russia's nuclear weapons program, including stockpile maintenance, is well recognized in both Presidential Decision Directives and in Government-to-Government Agreements. Given that IPP projects may not always employ Russian nuclear weapons scientists and engineers full time, it is possible that these specialists may work on nuclear weapons-related activities of the Russian Federation while not engaged on IPP projects. IPP project proposals are subject to careful interagency review, and deliverables will be scrutinized by U.S. National Laboratory Principal Investigators (see Section 14(1)) to ensure that they represent contemporaneous work by the NIS scientists and engineers involved.

Guidance: Scientists and engineers still employed in Russian nuclear weapons facilities are not precluded from working on IPP-funded projects. Scientists and engineers employed in non-Russian institutes who are actively working on nuclear weapons or related technologies are precluded from working on IPP-funded projects. Any contact of any NIS institute in any way associated with or related to weapons of mass destruction with any state or entity designated by the U.S. Central Intelligence Agency as being of "proliferation concern," is contrary to U.S. policy and will result in immediate termination of all IPP work and funding to that institute. Such contact will be considered a breach of faith of the conditions underlying the integrity of the IPP-funded relationship(s) to the fullest extent provided by law.

2. Biological

Preface: The Russian Federation, Belarus, Kazakhstan, and Ukraine are parties to the Biological Weapons Convention. Defensive work, to protect armed forces and other populations from biological agents, is permissible under the BWC. IPP project proposals will continue to be subject to careful interagency review for dual use implications, and deliverables will be scrutinized by U.S. National Laboratory Principal Investigators (Section 14(1)) to ensure that they represent contemporaneous work by the NIS scientists and engineers involved.

Guidance: It is not acceptable to fund scientists and engineers who are engaged in offensive biological weapons work or in work on missile systems to deliver biological weapons when they are not working on IPP-funded projects. Those scientists and engineers may, however, legitimately work on defensive biological warfare-related projects funded by their countries. Any contact in any way associated with or related to weapons of mass destruction with any state or entity designated by the U.S. Central Intelligence Agency as being of "proliferation concern," is contrary to U.S. policy and will result in immediate termination of work and funding to that institute. Such contact will be considered a breach of faith of the conditions underlying the integrity of the IPP-funded relationship(s) to the fullest extent provided by law.

3. Chemical

Preface: The Russian Federation, Belarus, Kazakhstan, and Ukraine are parties to the Chemical Weapons Convention (CWC) of 1997 outlawing offensive chemical weapons work. Defensive work, to protect armed forces and other populations from chemical agents, is permissible under CWC, as is research on means of destroying existing chemical weapons stocks. IPP project proposals will continue to be subject to careful interagency review for dual use implications; and deliverables will be scrutinized by U.S. National Laboratory Principal Investigators (Section 14(1)) to ensure that they represent contemporaneous work by the NIS scientists and engineers involved.

Guidance: It is not acceptable to fund scientists and engineers who are engaged in offensive chemical weapons work or in work on missile systems to deliver chemical weapons when they are not working on IPP-funded projects. Those scientists and engineers may, however, legitimately work on defensive chemical warfare-related projects funded by their countries, or work on development of means of destroying existing stocks. Any contact, regardless of nature, kind and description with any current or future country designated by the U.S. Central Intelligence Agency as being of "proliferation concern," is contrary to U.S. policy and will result in immediate termination of work and funding on IPP subcontract. Such contact will be considered a breach of faith of the conditions underlying the integrity of the IPP funded relationship(s) to the fullest extent provided by law.

6. Activities at Biological and Chemical Warfare Facilities in the NIS

Cooperative research in biological and chemical activities poses unique challenges to ensure that such cooperation contributes to nonproliferation and international security. Many areas of basic biological and chemical sciences that would be candidates for cooperative research could be redirected to provide material benefit to a biological or chemical weapons program. For this reason, IPP observes particular safeguards regarding its activities with scientists associated with NIS institutes that are known or suspected to have biological or chemical warfare experience.

General Guidelines:

1. All IPP participants must have a clear understanding of U.S. policy involving chemical and biological weapons nonproliferation as described above under Section 5, "NIS Institute Weapons Scientists, Engineers and Technicians."

2. Prior to initiating any activities, the interaction must be coordinated with the Department of State, the Department of Defense, and other government agencies as appropriate. ILAB Representatives and Principal Investigators (Section 14(1)) should provide supporting data as requested to support this coordination effort.

3. The principal objective of this interagency coordination is to ensure that IPP projects will not support or further the biological or chemical weapons knowledge base and that no IPP funding is provided to any NIS institutes currently engaged in offensive biological or chemical weapons related activities.

7. Intellectual Property

Section 575 specifies that the intellectual property rights of all parties to the program of cooperation (IPP) be protected. Both Section 575 and the Conference Report have as an objective the fair and equitable treatment and distribution of intellectual property rights under the IPP. To further this objective, DOE has granted Class Patent Waiver No. W(C) 94-010, to address rights to inventions made by NIS Institute employees under subcontracts with the National Laboratories. The class patent waiver provides an equitable allocation of rights to NIS Institute inventions and sets forth the obligations of the IPP parties receiving those rights. In addition, the IPP program has ensured a similar allocation of intellectual property rights between the IPP parties when the IPP projects are carried out through other agreements. All agreements between the participants under the IPP will reflect both the allocation of rights and associated obligations as set forth in the class patent waiver. For more detail, see Appendix A, "Intellectual Property Terms for NIS-IPP Subcontracts".

All individuals responsible for implementing the IPP program must be aware that it is absolutely essential to protect the intellectual property relating to the technologies developed under the IPP.
General Guidelines:

1. All individuals involved with the IPP process - employees of National Laboratories, industry participants, and DOE/NNSA - must understand the importance of, and be familiar with the necessary steps for, protecting intellectual property.

2. The National Laboratories should ensure that the terms and conditions of the Cooperative

Research and Development Agreements (CRADAs) and subcontracts under the IPP do not conflict with the terms and conditions of separate agreements that IPP Industry Partners or other entities may have with NIS Institutes. During the formulation of project proposals, the IPP Industry Partners and National Laboratories should inquire as to the existence of and identify to the IPP Director any such agreements.

3. In order to protect potential intellectual property rights from NIS Institute background technology, all participants in the IPP program should sign nondisclosure agreements with any NIS Institute providing them with access to its background technology. In the event license rights in NIS Institute background intellectual property are needed in order to commercialize IPP project technology, the NIS Institute will be equitably and adequately compensated for such license rights.

4. The National Laboratories and IPP Industrial Partners will make reasonable efforts to identify NIS Institute background intellectual property and include such identification in all IPP proposals.

5. The allocation of intellectual property rights should be discussed as early in the CRADA process as possible to avoid delays in negotiating and executing these agreements.

6. The National Laboratories, in accordance with their contracts and subcontracts with the NIS institutes and the class patent waiver giving them rights to NIS Institute inventions, are responsible for identifying, reporting, and protecting any intellectual property created under the IPP agreements to which they obtain rights.

7. Each IPP participant should develop a strategy for the early perfecting of rights in intellectual property for the specific technology and a licensing strategy for the intellectual property. In developing this strategy, consideration should be given to obtaining intellectual property protection in foreign countries in order to enhance the commercialization of the technology in those countries.

8. Intellectual property licensing agreements should reflect the relevant terms of the class patent waiver.

9. The IPP participants should use the legal and business expertise available to them at the National Laboratories and within DOE/NNSA to address and resolve intellectual property and technology transfer issues, and not rely on program and technical personnel for such support.

Detailed procedures and guidance for the protection of intellectual property are set forth in a separate document, entitled "Detailed Guidance for the Treatment of Intellectual Property under the Initiatives For Proliferation Prevention" (Appendix B).

8. Protection of Generated Information

Information (e.g., technical data) may be generated under the IPP that is commercially valuable and may also be subject to protection as intellectual property. Consistent with applicable statutes, such information should be protected to the maximum extent possible either by withholding the information from public dissemination and/or by obtaining intellectual property protection for the information. To the extent information is not commercially valuable or is no longer capable of being protected, such information that would contribute to the advancement of scientific knowledge should be broadly disseminated.

General Guidelines:

1. All IPP participants should have procedures to provide for the early identification and marking of commercially valuable information created under CRADAs, subcontracts, or other types of IPP agreements in accordance with the terms and conditions of such agreements.

2. The procedures for identifying, marking and protecting commercially valuable information should reflect the following criteria:

- Which specific information is considered commercially valuable.
- Whether the information describes an invention, and if so, the procedures for properly reporting it and subsequently protecting it through patenting.
- Under what conditions, and for how long, such information should and can be withheld from public dissemination.
- What information must be publicly released.
- Which information is analogous to trade secret or commercial or financial information that would be privileged or confidential, if such information had been obtained from a non-Federal party.

3. Research results associated with commercially valuable information, but not necessarily the information itself, should be publicly disseminated whenever possible without significantly diminishing the commercial value of the information or compromising the patent position.

4. All IPP participants should have procedures to ensure that marked generated information received from other participants is protected consistent with the legends on the information.

5. All generated information should be available, as requested by a DOE/NNSA contracting

officer, for use at other DOE/NNSA facilities with the same protection in place, if the information is required to meet the requesting facility's scientific mission.

Detailed procedures and guidance for the handling and protection of generated information are set forth in a separate document, entitled "Detailed Guidance for the Treatment of Intellectual Property under the Initiatives For Proliferation Prevention" (Appendix B).

9. Protection of Proprietary Information

Proprietary information and data are recorded information developed at private expense that embody trade secrets, or commercial or financial information the content of which is considered privileged or confidential by its owner. Proprietary information and data are not generally known or available from sources other than the provider, and are not available from anyone without obligation concerning their confidentiality.

USIC and the National Laboratories may be provided with proprietary information and data from NIS Institutes or private sector participants. Such information and data require protection, because, once such information is put into the public domain, it loses its value. Special attention must be given to protection of this information and data when provided in electronic format and when placing this information and data into a database.

General Guidelines:

1. IPP participants shall have procedures to assure the protection of proprietary information, data and background intellectual property. Nondisclosure agreements shall be signed by authorized representatives before such information is transferred between the IPP parties. Federal employees do not sign nondisclosure agreements because Title 18 of the United States Code, section 1905 prohibits them from wrongfully disclosing proprietary information and data.

2. No agreements should be made to protect orally transmitted proprietary information or data unless such information or data is promptly identified as being proprietary and reduced to writing and appropriately marked and dated with a legend by the provider within a mutually agreed upon period of time.

3. Legends specifically identifying the restrictions placed on use and disclosure of the proprietary information or data shall be conspicuously placed on all such delivered information.

4. Research results associated with proprietary information and data may be publicly disseminated whenever possible without disclosing such proprietary information and data, unless further restricted under a CRADA or other agreement.

5. Consistent with any use and disclosure restrictions or agreements, proprietary information and data can be transmitted between DOE/NNSA contractors without nondisclosure agreements pursuant to standard rights in technical data clauses contained in their contracts, provided such information and data are appropriately marked and receipt is acknowledged for same.

Detailed procedures and guidance for the protection of proprietary information are set forth in a separate document, entitled "Detailed Guidance for the Treatment of Intellectual Property under the Initiatives for Proliferation Prevention with the New Independent States" (Appendix B).

10. Classification and Export-Controlled Information

To meet the IPP objectives, close collaboration between U.S. and NIS participants is necessary. It is absolutely essential that all U.S. and NIS participants perform this collaboration in full compliance with all relevant national security requirements and policies between the U.S. and the NIS for preventing the proliferation of weapons of mass destruction.

NIS participants will be advised of this policy and required adherence thereto.

General Guidelines:

1. DOE/NNSA and National Laboratory personnel are responsible for complying with all applicable DOE classification and export control requirements. DOE/NNSA and National Laboratory personnel will avoid any activity that is directed toward the development or enhancement of the capabilities of weapons and weapons systems, including weapons of mass destruction.

2. National Laboratories shall review site-specific procedures as they relate to this program to assure that national security and export control requirements are met in the conduct of all aspects of the IPP. This review should ensure that there are adequate safeguards in place to prevent the release of any classified information, unclassified controlled nuclear information, or export controlled information. Procedures for release of information to NIS participants, access to software and intellectual property, physical access to DOE/NNSA facilities, and release of information by DOE/NNSA travelers will follow existing DOE orders, policies and procedures. Each Principal Investigator (Section 14(1)) is to be aware of the responsibilities for national security and export control concerns.

3. All IPP projects must adhere to all U.S. export controls regulations. In order to accomplish this, proposals should be developed and reviewed in terms of the following:

- Does the project involve a technology that requires an export license or is considered sensitive according to DOE/NNSA or Department of Commerce regulations?

- Is the NIS participant or other end user of the technology subject to special regulation by the export controls community or will participation with a given institute or other end user violate U.S. export controls policy?

- Will the proposed project enhance the capabilities of the NIS nation to improve their capabilities to produce weapons of mass destruction?

- Are any of the proposed participants, including the proposed industrial partner, currently under investigation or indictment for violating U.S. export controls regulations?

- If any of these conditions exist, ILAB representatives should prepare a plan for addressing each issue prior to submitting the proposal to DOE/NNSA Headquarters for review or terminate proposal development.

4. Instruments, computers, equipment, and information provided to the NIS Institute must meet export control requirements.

5. National Laboratories will specifically inform all participants when information that has been identified as export-controlled information may be involved in a project. National Laboratories and USIC will inform industrial participants of their obligations relating to export control licenses.

6. The DOE/NNSA Nuclear Transfer and Supplier Policy division (NTSP) reviews all IPP project proposals to identify any export control issues. NTSP then provides recommendations to the IPP Director concerning the resolution of such issues or recommending the disapproval of a given proposal.

7. The National Laboratories are responsible for obtaining any required export control licenses for IPP-funded activities in the NIS that involve the National Laboratory as a signatory to a subcontract or Agreement with the NIS entity. For agreements or subcontracts in which DOE/NNSA is the signatory, export license responsibility is assumed by DOE/NNSA. National Laboratory participants should not assume that blanket exemptions or export controls licenses for their laboratory or other DOE/NNSA programs will apply to IPP funded-activities even if such activities are complimentary to the exempted or licensed program.

8. All DOE/NNSA travel, including IPP-funded travel, is subject to review by the NTSP.

11. Exempted and Exceptional Circumstance Technologies

Under Title 35 of the United States Code, Section 202(a)(iv) (35 USC 202(a)(ii)), the DOE

Naval Nuclear Propulsion Program and certain DOE/NNSA programs that are funded by the Defense Programs division of DOE/NNSA have been exempted from the management and operating contractor's right to elect to retain title to inventions. Under 35, USC 202(a)(ii), Federal agencies are also authorized to make determinations when restriction or elimination of a small business or nonprofit contractor's right to retain title to any invention will better promote the policies and objectives of the law including commercialization of the invention. To date, exceptional circumstances determinations have been made by DOE on those technologies that relate to:

- Uranium enrichment, including isotope separation;
- Civilian high-level nuclear waste or spent nuclear fuels;
- Classified or sensitive information under Section 148 of the Atomic Energy Act of 1954 as amended;
- the Steel Initiative; or
- the U.S. Advanced Battery Consortium.

Currently, the Department's policy for each exceptional circumstances technology is that title to inventions falling within each affected technology remains with the Government.

General Guidelines:

1. The Department will, for any additional exceptional circumstances determination, consider as a factor the goals of Public Law 101-189 as to whether retention of commercial rights to inventions by its management and operating contractors will best assist widespread utilization and commercialization of the technology without detriment to DOE/NNSA's programs.

2. Contractors may propose commercialization plans for specific technologies falling within existing exceptional circumstances categories and requests a DOE/NNSA waiver of invention rights to specific inventions in these categories. Such requests should be made through normal DOE/NNSA reporting channels.

12. Cost-Sharing and Apportionment

A. Cost-Sharing

Cost-sharing is a critical element of the IPP. The IPP Industry Partner is expected to provide cash funds, an equivalent value of in-kind funds, or a combination of both, equal to those

provided by DOE/NNSA. Resource-sharing is an indicator of private sector interest in the technology and is a factor in justifying IPP investment. In order to respond to special opportunities, a flexible approach to in-kind contributions is taken under the IPP.

B. Apportionment

It is the policy of IPP and the intent of Congress to maximize the amount of funds for the NIS participants in each project. Specific apportionment will be made for each project in accordance with currently applicable law, regulation or policy, and will be stated in project approval letters issued by the IPP program.

General Guidelines:

1. IPP participants will seek to maximize the leverage of DOE/NNSA resources, considering both costs and benefits.

2. Generally, IPP funds flow to the National Laboratory, the NIS Institute, the NIS scientists and other staff, and/or other participating entities that are specifically designated in the project and project approval letter. IPP funds for project activities shall not be transmitted directly to an IPP Industry Partner, or any other intermediary, other than CRDF, ISTC or STCU. This follows from DOE-HQ guidance for all Russia and NIS programs (Appendix C).

3. Matching funds and in-kind sharing are items negotiated between the National Laboratory and the IPP Industry Partner.

4. Allowable sources for matching funds include:

- Private sector cash payments;
- Cash payments from other non-Federal sources (i.e. loans, small business development loans, etc.);
- Costs for industry personnel work which has direct relevance to the project; and
- Costs for equipment, materials, hardware, and software that have direct relevance to the project.

5. Under normal circumstances, the matching contributions will be made at the initiation, and during the course, of the project. However, there are provisions for counting resources spent prior to the commencement of the partnership project when it can be clearly demonstrated that these investments contribute directly to the specific tasks outlined in the project statement of work. The IPP Director will approve all requests for such exemptions prior to negotiating the

subcontracts or CRADAs affiliated with the project.

6. Costs directly attributed to the development and negotiation of the CRADA or contracts affiliated with the project may not be counted towards the cost-share requirement.

7. Costs for travel as part of the project development or project activities may be counted as part of the industry cost-share.

8. The criteria for evaluating monetary or in-kind cost-sharing by the IPP Industry Partner shall include the benefit to the national objectives, including nonproliferation and U.S. competitiveness, and also factors such as:

- Benefit to DOE/NNSA programs, benefit to Industry Partners and benefit to the NIS Institutes;
- Technical value added to the project;
- The estimated cash equivalent of the contribution, as well as the type of contribution in terms of how it will benefit the NIS partner;
- The financial and technical resources of the IPP Industry Partner and their demonstrated or estimated ability to complete the proposed project and bring the technology to market; and
- Additional non-commercial funds from other Federal agencies that support the project. (Note: This excludes federal funds which support the IPP Industry Partner as opposed to the commercial endeavor or technical project.)

9. Before initiating the final CRADA and contract negotiations between the National Laboratory and IPP Industry Partners, there should be a mutual understanding of the mechanism for evaluating any dollar-value equivalents for in-kind contributions that can be verified by independent parties.

10. A waiver of DOE/NNSA's minimum cost-sharing requirement may be considered in situations where an IPP Industry Partner's contribution of less than exact matching will enable an otherwise meritorious project or will maintain the cooperative spirit of the IPP. This waiver may be granted only by the IPP Director. Such waivers do not exempt participants from regulations and guidance associated with the CRADA process.

13. Labor Costs, Overhead and Taxes in the NIS

As a result of discussions with the Department of State, DOE/NNSA has determined that, in order to insure U.S. Government consistency, National Laboratories should negotiate labor costs consistent with similar rates under the International Science and Technology Center (ISTC) program. Accordingly, a labor rate of up to $35 per day has been established. Charges under subcontracts with NIS Institutes at levels above $35 per day require the specific approval of the IPP Director. Overhead expenses must be identified and accepted by the authorized contracting officer, or equivalent, at the time of contract award.

IPP funds are considered assistance provided by the U.S. to the NIS. As such, no IPP funds, equipment or services should be subject to taxation or customs in any of the NIS nations. To eliminate the payment of all social and income taxes, all payments will be made through the Civilian Research and Development Foundation (CRDF), the ISTC, or the Science and Technology Center in Ukraine (STCU), as determined by the IPP Director.

General Guidelines:

1. The purpose of the IPP is to support NIS weapons scientists and engineers in nonmilitary scientific and commercial research and development. Overhead expenses imposed by NIS Institutes may be no more than 10% of the project value and must be associated with support of scientists and engineers and defined in detail by the NIS Institutes and included in contracts.

2. The NIS participants should provide sufficient detail in proposals to the National Laboratory contracting officers so that labor costs and overhead expenses can be identified and evaluated.

3. Salaries to NIS scientists will be paid directly to the scientists through an approved payment mechanism as listed above.

4. IPP funds paid through CRDF, the ISTC and the STCU are exempt from taxes.

14. Project and Costing Accountability Safeguards

Procedures are necessary to assure that funds sent to the NIS are spent efficiently and that project objectives are met. Rapid expenditure of funds or "costing" will not be the principal performance measure for IPP projects; payments are to be associated with delivered products. Funds are to be expended over the lifetime of the subcontracts to assure accountability and to ensure that funds are not diverted away from the intended purpose of the subcontracts.

Each contracting mechanism (whether through ISTC/STCU, DOE Procurement, or National Laboratory subcontract) should be on a "fixed-price" basis that specifies how the funding is directed towards specific project work and expenses. Contracts shall contain a specific schedule of project deliverables and progress payments to the NIS Institute, salary levels, and overhead

charges not to exceed 10 percent. Principal Investigators (see below) shall play an active role in the accountability process by providing details of expenditures and deliverables to the ILAB Representative. Payment of deliverables shall be made according to an IPP-approved payment mechanism.

General Guidelines:

1. The U.S. Principal Investigator (PI) for each project is the main point-of-contact for that project and is accountable for the project, its projected cost estimates, and the acceptability of progress payments. Although it is desirable to have the PI working as a regular, full-time employee of his/her national laboratory (or the KCP), it is recognized that, on occasion, and with the concurrence of the IPP Director, well-qualified, part-time employees of the National Laboratory may be especially suited for project technical oversight.

2. PI's shall review and evaluate the quality and quantity of each deliverable and determine if the work product delivered justifies the cost. This evaluation shall be reported to Headquarters, the ISTC, STCU or CRDF, as appropriate, for payment.

3. On-site project reviews in the NIS shall be conducted by the PI or by other appropriate IPP participants.

4. Departures from contract provisions will be evaluated and are grounds for contract termination.

15. Depreciation, Added Factor Costs and Advance Payments

It is DOE/NNSA policy that private sector participants should generally be charged for depreciation and added factor costs for the use of DOE/NNSA facilities and services. However, DOE/NNSA will consider the waiver of depreciation and added factor costs for technology transfer, consistent with existing DOE/NNSA policy, where there is a clearly demonstrated programmatic benefit. National Laboratory Directors have the discretion to request a waiver of these charges from the cognizant DOE/NNSA official when a particular cooperative activity is expected to result in direct benefits to DOE/NNSA programs.

General Guidelines:

1. In a CRADA with an industrial participant under the IPP, the National Laboratory shall assure that the joint work statement clearly sets forth the benefits to the U.S. Government, so that a waiver of depreciation and added factor costs, if warranted, can be documented as part of the joint work statement approval process.

2. In agreements other than CRADAs, National Laboratories will be expected to document mission benefits that clearly demonstrate tangible benefits to the program if a waiver is requested, and such documentation shall be submitted to the DOE/NNSA contracting officer for approval.

3. In a funds-in CRADA with small business firms, National Laboratories may minimize the financial impact of advance payments on such firms by:

- providing out of award/management fees, royalties, or other corporate funds (but not Federal funds) the advance funding;
- negotiating a shorter time period than the current 90-day period for advance funding; or
- having the small business firms establish an irrevocable trust or escrow account as described in the Acting Chief Financial Officer's memorandum of August 4, 1992, entitled "Guidance on Advance Funding Under Cooperative Research and Development Agreements (CRADAs)."

4. Advance payments to participating NIS Institutes are not allowed except for purchase of equipment, materials or other limited and reasonable expenditures deemed necessary to initiate the project.

16. Indemnification

The Secretary of Energy has authorized indemnification under Public Law No.85-804 for DOE contractors conducting high risk national security work in the former Soviet Union and has informed the Vice President that DOE will provide such indemnification to other contractors engaged in similar work under the following conditions:

1. The particular activity falls within one of the following categories:

- Participation in the Department's Nuclear Emergency Search Team, Accident Response Group, Crisis Response Team and other radiological emergency response operations conducted outside the United States.
- Maintenance and repair of nuclear weapons conducted outside the United States, including the safe secure dismantlement of weapons in the former Soviet Union.
- Packaging and transportation of radioactive material outside the United States for nonproliferation purposes.

- Modifying foreign nuclear material production reactors in order to reduce their capacity to produce weapons-grade material and improve their safety.

- Nonproliferation activities in connection with nuclear weapons or weapons-usable material outside the United States, such as establishing a safeguards system to prevent diversion of weapons or weapons materials.

- Assistance in the redesign of foreign research and test reactors so that they are capable of using low rather than high-enriched uranium and thus reduce the potential for loss or diversion of high-enriched uranium.

2. The indemnification facilitates the national defense.

3. The benefits accruing to the common defense and security by the conduct of the activity outweigh the financial risk of the indemnification.

4. The activity is not likely to be performed without the indemnity being provided.

5. The activity is not adequately covered by other indemnification or by legislation or treaty.

6. If a contractor believes that work it is conducting meets these conditions, it should request such indemnification from its DOE/NNSA contracting officer.

7. This indemnification is not available for activities involving nuclear safety activities at civilian reactors. By letter dated September 26, 1994, the Vice President informed nuclear suppliers engaged in, or potentially engaged in, U.S. Government-sponsored programs to improve the safety of nuclear power plants in the Russian Federation and Ukraine that the bilateral agreements the U.S. Government has executed with Russia and Ukraine provide sufficient basis for firms to participate in these safety programs.

17. Project Approval Process

All proposals for IPP projects must be reviewed and approved by the IPP Director for consistency with program objectives and project approval criteria, to verify that all project activities are consistent with U.S. nonproliferation policy and do not conflict with other U.S. Government programs or regulations. All proposals put into the review process should have the full and detailed statement of work, to include deliverables, citations of pertinent literature, and individual weapons of mass destruction *bona fides* of the NIS Institute staff to be engaged in the project. This listing of *bona fides* shall include the name and title of the staff member, the role to be played in the project under review and former weapons of mass destruction involvement

according to the following three categories:

1. Formerly involved in weapons of mass destruction or strategic delivery systems research, development, production or testing.

2. Formerly involved in research and development of the underlying technology of weapons of mass destruction or strategic delivery systems.

3. No former weapons of mass destruction or strategic delivery systems involvement.

See Appendix D, "IPP Guidance for Evaluating Weapons Scientists and Engineers".

Proposals for IPP projects are solicited from and peer evaluated by participating national laboratories through technical committees comprising various members of the ILAB. Preliminary dual-use reviews are completed by the technical committees. Proposals are reviewed by the professional staff of USIC for commercial potential and to assess the business *bona fides* of the U.S. Industry Partner. Completed proposals are forwarded to the IPP Director by the ILAB Chair for interagency review and the NNSA Headquarters funding decision. The final review is carried out by the IPP Headquarters staff at the direction of the IPP Director.

Within DOE/NNSA Headquarters, projects are reviewed by the NTSP (Nuclear Transfer and Supplier Policy division) for export control considerations. It may be necessary, after project approval, for the National Laboratory to apply for an export license, through the regular channels. The IPP Program Office, working with the NTSP, will use its best efforts to expedite this process.

The IPP formal review consists of coordinating a review among the various DOE/NNSA Program Offices and the U.S. Government interagency for a full evaluation in terms of congruence with U.S. policy, nonproliferation impact and program coordination. This interagency review includes a policy review by the Cooperative Threat Reduction Program of the Department of Defense, review by the Department of State for congruence with U.S. policy and lack of overlap with Science Centers Programs, review by the Defense Threat Reduction Agency for dual-use aspects, and special review by other interagency elements for dual-use aspects (chemical and biological projects only). The review by the interagency community includes review of the detailed Statement of Work for each project, including the deliverables list and relevant publications.

Following approval, the IPP Director allocates and distributes project funds. The National Laboratories are responsible for negotiating the appropriate CRADAs needed to initiate work on the project. ILAB Representatives are responsible for monitoring the progress of the projects in order to verify that project activities are completed within the scope and funding of the approved proposal, reflect the IPP General Program Guidance and remain in compliance with all relevant

DOE/NNSA regulations and U.S. laws.

A schematic of the review and approval process follows. Flow is from left to right, but some review processes may be carried out in parallel to expedite approval:

Entity	National Laboratories	U.S. Industry Coalition	DOE/NNSA Headquarters	Interagency	DOE/NNSA Headquarters
Review or Action	*Technical *Dual-Use *Commercial *Deliverables *Tasks *WMD *bona fides*	*Commercial Viability *Industrial Partner	*Policy *Export Control *Overlap with other USG, DOE/NNSA Programs	*Dual-Use *Dept. of Defense *Dept. of State	*Project Approval *Funding Allocation

Note: Proposals may be sent back or dropped at any stage.

General Guidelines:

1. The IPP Director will coordinate the review of all proposals by appropriate DOE/NNSA Headquarters Program Offices for consistency with other programs and conformity with DOE/NNSA domestic and international policies and programs.

2. The IPP Director will coordinate the review of all proposals within the interagency community.

3. All IPP project approvals and funding instructions will be furnished in writing. Any oral notification should be viewed as a courtesy, not as the basis for initiating project activities.

4. All funds allocated must be spent on the designated project and only the designated project. The split of allocated funds between the national laboratory and the NIS Institute must be adhered to as a condition of project approval and continuation.

5. Multi-year projects typically are approved for their entire term, but receive funding for the first year only. National Laboratories seeking subsequent year funding for multi-year projects will provide a formal project review, by videoteleconference if possible, to include: results vs. the Statement of Work; any modifications needed to the Statement of Work based on the results, viability of overall project goals in light of competitive developments or advances in the field; performance of all parties to the project (NIS Institute, U.S. Industry Partner); and plans for use of subsequent year funding if granted. It is the intent of IPP to provide subsequent year funding as soon as possible after favorable project reviews.

6. A National Laboratory, through the ILAB Representative, may elect to cancel a project after DOE/NNSA approval has been granted. Each National Laboratory is responsible for ensuring that such a cancellation is within the scope of any signed CRADAs, contracts or similar obligations. Upon cancellation, ILAB Representatives should notify the IPP Director and the IPP Finance Officer of any remaining funds assigned to the canceled project. Uncosted project funds usually will be returned to the general category of pre-positioned IPP funds at the National Laboratory for allocation to future IPP projects.

7. After a project is approved, National Laboratories or IPP Industrial Partners may propose modifications to the funding or scope of the project without having to complete an additional project review. The IPP Director reserves the right to require additional reviews as necessary. Any major change to the scope of an approved project must be authorized, in writing, by the IPP Director.

8. After approval by the IPP Director, subsequent DOE/NNSA Headquarters review may be required if the project is later determined to have the potential to:

- Negatively affect another DOE/NNSA program;
- Involve significant future DOE/NNSA liability or program burden;
- Involve issues of U.S. domestic or international competitiveness that the National Laboratory or DOE/NNSA Headquarters are unable to resolve;
- Depart from the IPP model CRADA terms and conditions;
- Require significant changes to National Laboratory operating or financial plans;
- Depart from the spirit of mutual benefit of the IPP;
- Impact later changes in U.S. nonproliferation policy; and,
- If the NIS Institute acts in contravention of this General Program Guidance,.Section 5, "NIS Institute Weapons Scientists, Engineers and Technicians", written pursuant to Reference Section 3136, Title XXXI, DOE National Security Authorization for FY 2000;
- If the NIS Institute or country is placed under sanctions (U.S. government or subject to action by the Department of State which identifies the NIS Institute or nation as actively supporting terrorists or rogue state, or is listed as a sponsor of terrorism); and,
- If the IPP Industry Partner changes its commercial focus or experiences unforeseen

financial or organizational changes unrelated to the IPP program, which call into question the IPP Industry Partner's ability to complete the project or bring the completed product to the marketplace.

18. Project Development Criteria

Consistent criteria and standards are necessary to ensure compliance with the program goals, and to assure that all proposals are judged equally. Each ILAB Representative is responsible for coordinating the proposal development process at his/her own National Laboratory. The ILAB Representative shall review all proposals before officially submitting them to the technical committees and DOE/NNSA Headquarters.

ILAB Representatives are responsible for determining if a proposal fits within a National Laboratory's mission and technical capabilities. ILAB Representatives have the primary responsibility for determining if and when proposals should be submitted, and should rank their proposals in their order of preference for funding purposes. The DOE/NNSA will not direct a National Laboratory to initiate a project deemed unsuitable by the ILAB Representative.

General Guidelines:

1. Proposed projects must:

- Not include weapons and delivery system design activities;
- Not provide assistance in the maintenance or improvement of military technology;
- Be consistent with U.S. National Security Policy;
- Be consistent with export control and classification requirements, and with existing DOE/DOS agreements on collaboration;
- Protect the intellectual property rights of all parties;
- Employ verified weapons scientists and engineers;
- Provide mutual benefits to participating countries;
- Have demonstrable commercial benefits for the NIS and the U.S.

2. Proposals shall be submitted online through the IPP Lotus Notes Information System. Since clarity of presentation facilitates the evaluation process, proposals should be edited for grammar

and style, and should be proofread to ensure that jargon and abbreviations are avoided and that all of the information requested in the Lotus Notes format is provided. Proposals that are incomplete or not edited prior to submission to DOE/NNSA Headquarters will be returned without approval.

3. DOE/NNSA will review proposals only after the responsible ILAB technical committee has made its recommendation to the IPP Director and has forwarded the proposal to DOE/NNSA Headquarters via the ILAB Chair.

4. Specific instructions for entering data in the Lotus Notes Database are available from the IPP Information Systems Manager at the Center for International Security Affairs office, Los Alamos National Laboratory. It is essential that all projects and proposals are complete and consistent with other proposal and project data since this enables the IPP Information System's capability to sort and report program-wide data. Guidelines for entering data are included as a reference in the Lotus Notes Database.

5. Project Summaries are a primary source of information for the review and approval process. In addition, this information is essential for responding to external requests for information and fulfills a wide range of management needs. It is essential that Project Summaries accurately describe commercial, technical and nonproliferation benefits. Several portions of the project summaries are critical to maintaining program integrity and are described as follows.

5a. *Project Summary section*: The project summary section is the technical summary of the project. It is composed of two parts. The first part is a stand-alone paragraph stating the technical goal and the commercial significance of completing the project. The second part is a more detailed technical summary, including descriptions of:

- How the project demonstrates the commercial/technical feasibility of an existing concept or will develop a new concept, if new and nothing exists;
- Potential hurdles and how they will be addressed;
- For a T-2 project based on T-1 research, outcomes of the previous T-1 research;
- The current state of technology in this field and how the project furthers the technical or commercial boundaries of this field;
- Which research organization will perform which tasks and the backgrounds of the U.S. and NIS PIs; and
- References of open source, contemporary, topical publications by the NIS scientist and other relevant publications.

5b. *Nonproliferation Impact*: IPP proposals should cite how the project will redirect weapons expertise and/or what weapons of mass destruction facilities will be impacted. Proposal summaries shall include information explaining the former weapons of mass destruction role the affected NIS Institute and each NIS scientists had in the former Soviet Union. Individual nonproliferation *bona fides* of NIS staff members working on the project must be listed in a table as described in the Project Approval Process section.

5c. *Benefit to NIS*: This section shall detail the benefits the NIS scientists and NIS Institute will derive upon successful completion of the project. Specific criteria include:

- Long-term jobs created in the NIS and the United States,
- Development of profitable relationships with U.S. companies,
- Creation of spin-off companies from NIS Institutes,
- Number of patents or dollar amount of projected royalties,
- Impact on environmental remediation programs in the NIS,
- Improved standard of living or quality of life, including health and safety benefits,
- Any upgrades to the NIS institute and equipment to be purchased, if known, and
- Development of commercial markets or the ability to service an existing market based on the development of new or improved production capabilities.

5d. *Industrial Applications (T-1 proposals)*: Overall, the Industrial Applications section should demonstrate how successful completion of the proposed project will impact the current marketplace. A plan for the successful transition of a completed Thrust I to a Thrust II level shall be provided. If appropriate, ILAB representative should list potential corporate collaborators for future TII projects.

5e. *Industrial Applications (T-2 proposals)*: For a T-2 proposal, the ILAB Representative or Principal Investigator should work with the Industry Partner to detail how the completed T-2 product will compare with products or services currently on the market, what the expected profits/benefits vs. production/development costs are and how the final product will be integrated into the current market. Specifically, this section should address the following points:

- How the final product compares with currently available goods and services in terms of cost and performance;

- How this product will be integrated into an existing process and its benefits in terms of savings or improved performance/efficiency;
- The size of the market and an assessment of market potential versus development cost;
- What obstacles will remain, upon completion of the project, towards achieving commercial success with the results of the completed project;
- How the Industry Partner and/or National Laboratory plan to achieve commercial success (i.e. what is the business plan);
- If the Industry Partner is investing money into the overall development effort beyond what is required for the IPP cost-share requirements and, if so, how much?
- If the effort the focus of several competitive companies; and
- How/why the Industry Partner is capable of completing the project and successfully commercializing the product, in terms of organizational resources, relevant experience and financial stability.

ILAB members may also utilize the *Business Plan Summary* section as required to supplement this data.

5f. *Funding Information*: ILAB Representatives should complete the *Proposed Funds* section at the time of proposal submission. Upon approval, ILAB Representatives should enter information in the *Allocated Funds* section based on data supplied in the project approval letter. Throughout the life of the project, ILAB Representatives shall maintain the *Dispersed Funds* section on a monthly basis. ILAB Representatives shall submit the full amount of funds required to complete the entire project and shall state, in the *Project Summary* section, how many months will be required to complete the project.

5g. *Total FTE*: The number of people employed in the NIS is a primary indicator of program success. Employment figures are based on Full Time Equivalent, or FTE, which is the number of man-hours converted into man-years. ILAB Representatives should assume a forty-hour work week for all calculations and in the absence of calculated labor rates should assume a $5400/year salary for each NIS scientist engaged in the project. This number should be revised upon completion of contract negotiations between the NIS Institute and the National Laboratory.

19. Outreach and Fairness of Opportunity

Outreach includes all efforts designed to provide potential participants with an awareness of the opportunities available in the IPP. It includes national, regional, and local interactions with industry, universities, state and local governments, and other federal agencies.

The fairness of opportunity requirement to notify interested parties is met with the establishment of USIC. USIC maintains an outreach program utilizing the Commerce Business Daily and/or the Federal Register to notify potential members of IPP opportunities and to solicit new members, to continue to satisfy the fairness of opportunity requirements.

General Guidelines:

1. The IPP Program Office is responsible for outreach at the national level, including coordination with other Federal agencies.

2. USIC is responsible for administering an outreach program for U.S. industry. This outreach program will satisfy all Federal fairness of opportunity laws and regulations. The focus of the outreach program will focus on:

- U.S. industry awareness of the IPP program and program opportunities,
- Promoting specific technologies and capabilities in the NIS,
- Promoting specific technologies and capabilities at the National Laboratories, and
- Identification of technical and commercial needs of U.S. industry and specific USIC-affiliated Industry Partners and informing the National Laboratories and NIS Institutes of these needs.

3. Laboratories and other participants are responsible for developing and conducting individual outreach programs to promote awareness of specific capabilities and technologies available in the NIS. These outreach programs will target non-USIC, as well as USIC-affiliated participants.

4. Outreach programs should include solicitation and utilization of private sector feedback.

5. USIC shall coordinate its outreach activities with the IPP Program Office and with the ILAB to ensure effectiveness.

6. Laboratories must ensure that fairness of opportunity has been met for CRADAs entered into with USIC-affiliated Industry Partners, and adequately documented in the joint work statement.

20. Personnel Exchanges

Exchange of individual scientists/engineers, and exchange of teachers/students for training purposes is generally encouraged. The benefits of exchanges must be consistent with IPP program objectives and compared with less costly options.

General Guidelines:

1. Because of travel and other related costs, alternatives to exchanges should be explored, including telecommunications.

2. Specifics of the exchange should be fully understood by all concerned parties. Issues including purpose and scope of the exchange, length of time, costs, liabilities, insurance, intellectual property rights, etc., must be resolved in advance.

3. All necessary approvals must be obtained from the host organization before the trip.

4. Requests for vacation and other personal time while in transit by any traveler is to be carefully scrutinized by the paying organization.

5. All foreign travel by DOE/NNSA employees and contractors, and by all foreign national visitors and assignees to DOE/NNSA facilities, must comply with applicable DOE orders, security procedures and other requirements provided by the Department of State.

6. Approval of the visit or assignment of NIS personnel to the U.S. must not be perceived as "sponsoring" the person to become a permanent resident.

7. There must be strong technical reasons that the project benefits from NIS personnel being in the U.S., rather than remaining in the NIS.

21. Travel

Foreign travel is an integral operational requirement by participants in the IPP program. Travel is necessary to build relationships, develop and review projects and maintain the overall program. In order to comply with current DOE and Federal regulations concerning foreign travel by Federally funded personnel (i.e. Federal employees, National Laboratory employees and other contractors), travelers should coordinate their activities with the Director of IPP.

General Guidelines:

1. The IPP Director must approve all travel funded by or otherwise involving the IPP program. All prospective travelers should coordinate with the IPP Administrative Officer at DOE/NNSA

Headquarters.

2. In order to comply with DOE Order O 551.X on Official Foreign Travel, travelers shall coordinate foreign travel as far in advance as possible, and at least 45 days in advance. Travelers shall prepare a DOE Form 1512 and enter it into the Federal Travel Management System (FTMS). Local approvals must be completed in FTMS and the paperwork must be rousted to the IPP program office at Headquarters no less than 30 days in advance. Failure to route Form 1512 to Headquarters 30 days in advance may result in an inability to secure country clearance. Waivers must be drafted by the traveler and submitted to the IPP Travel Administrator via electronic mail. Waivers must be granted at the Deputy Administrator level. Late submissions must include a statement justifying the need for the exception in the comments section.

3. When preparing Form 1512, travelers shall include the IPP Director as the Headquarters approving officer. The correct B&R code needs to be inputted for funding source.

4. When preparing Form 1512, the relevant IPP project number and title must clearly be identified in the itinerary.

5. Travelers are also responsible for providing a draft country clearance cable and forwarding it to the IPP Travel Administrator for review and transmittal to the State Department. It is the responsibility of the laboratory/site to draft these cables themselves. Travelers shall not transmit cables directly to the State Department or the US Embassy. Contact the IPP travel administrator for assistance in preparing the draft cable.

6. Draft cables must be submitted to the IPP Administrative officer 30 days in advance of travel. Cable submissions should be made electronically.

7. Country Clearance Cables are needed for all travel to all sensitive countries, including the former Soviet Union. Cables are required for travel for federal employees to all countries. Cables are required for laboratory or contractor travel to all countries as well. In the case of most non-sensitive countries, a notification cable assuming clearance will be needed.

8. All travel to sensitive sites in the Russian Federation (i.e. the closed cities) needs to go through the Embassy 48 days in advance of travel. This means that the laboratory/site needs to notify the travel administrator of such trips at least 49 days in advance so that the Embassy can be notified in a timely manner. The purpose of the notification is to allow the Embassy to send a representative on the trip. If an Embassy representative wishes to accompany the travelers on the trip, the laboratory/site needs to request access into these sites along with the rest of the delegation. Failure to provide proper notification to the Embassy may result in a denial of country clearance for the same travel.

9. Travelers are responsible for coordinating their own entry and exit visas for foreign travel.

10. Travelers will make all necessary logistical arrangements (i.e. hotel, transportation, translators, etc.) IPP participants are no longer discouraged from requesting U.S. Embassy services to arrange for logistics or be met at the airport by U.S. Embassy representatives. If travelers are requesting embassy assistance of any kind, it must be put in the cable along with fiscal data/credit card number and the cable needs to be sent to the program office at least four weeks prior to departure from the U.S.A.

11. Travelers are required to notify the DOE Representative and the Science and Technology Officer at the U.S. Embassy in Moscow to provide a briefing on the trip activities. Notification to the U.S. embassy should be made by e-mail at least a week prior to departure. In the email, specify if and when you will be in the Moscow, St. Petersburg or Yekaterinburg regions. The Embassy may request a briefing if it is convenient for travelers to visit these cities, or may brief over the phone.

12. Travelers should take steps to avoid unnecessarily risky travel. Travelers are advised to review the travel safety database on the IPP Information System or to check with the Department of State travel advisory web site. Specific areas of concern include air safety, rail safety, crime rates, health advisories and possible civil unrest.

13. Travelers should check with their parent organizations to determine what travel safety programs or insurance are available to cover medical emergencies, emergency evacuation, natural disaster, legal problems or other similar unexpected events.

14. Travelers shall provide a detailed trip report to the IPP Director within 30 days of return to the US. Reports shall include the identity of institutes and personnel visited, a summary of all decisions, the results of any IPP program and project commitments made. The trip report shall conform to the format specified in DOE Order 551.X, and a copy of Part 1 must be submitted to the Office of Science and Technical Information (OSTI) as specified in the order. Failure to submit a trip report on time may result in denial of future trips. Travelers shall also send a copy of the trip report to the program office travel administrator.

The current Department of State and Department of Energy instructions for drafting and submitting cables are attached as Appendix E, "Standard Operating Procedures for Official Travel to the Russian Federation (December 2001)".

DOE Order 551.X is attached as Appendix F.

22. U.S. Competitiveness

United States competitiveness policies apply to all IPP projects. In particular, the guidance and

CRADA provisions set forth in DOE's Modular CRADA are to be followed in the CRADA negotiations between the National Laboratories and USIC members. The guidance and provisions, both preferred and optional, provide for the flexibility needed in CRADAs with a diverse group of companies, such as USIC members. In the class patent waiver DOE has granted for the IPP Program, the NIS Institutes/Inventors have been granted title in the NIS countries to the NIS institute inventions. No U.S. competitiveness requirements have been imposed on the NIS Institutes under the National Laboratory subcontracts.

General Guidelines:

1. Processes, services, and improvements thereof that are covered by intellectual property developed under CRADAs shall be incorporated into the CRADA participant's manufacturing facilities in the U.S., either prior to or simultaneously with implementation outside the U.S. Such processes, services, and improvements, when implemented outside the U.S., shall not result in reduction of the use of the same processes, services, or improvements in the U.S.

2. Products for use or sale in the NIS that are covered by NIS intellectual property protection and developed by the NIS institutes under subcontracts with the National Laboratories should be substantially manufactured in the NIS by NIS entities.

3. In the exceptional cases where the preferred benefit of substantial U.S. manufacture cannot be achieved in a particular IPP CRADA, other substantial economic benefit to the U.S. economy must be identified before approval of the CRADA. The DOE Modular CRADA provides relevant guidance and examples of alternative economic benefits that may be provided to meet the U.S. competitiveness requirement.

4. IPP projects should be sought that enhance:

- Direct or indirect investment and reinvestment in the NIS,
- Return on U.S. investment in the NIS,
- Export of U.S. goods and services,
- U.S. receipts of international royalties, and
- Direct or indirect investment in the U.S., or U.S. skills and job base.

5. The issue of U.S. competitiveness should be discussed and resolved with prospective CRADA partners, preferably before completion of the CRADA Joint Work Statement.

23. Technology Transfer Mechanisms

There are many possible technology transfer mechanisms to support the IPP program, including CRADAs, contracts, cost-shared contracts, subcontracts, grants, cooperative agreements, use of facilities, work for others, research and development consortia, personnel exchanges, licensing of intellectual property, presentations at technical meetings, scientific and technical publications, employee consulting and assistance, and exchanges of data and software. National Laboratories, in cooperation with their potential USIC member participants, are encouraged to explore use of these mechanisms.

General Guidelines:

1. All mechanisms used for technology transfer must be consistent with DOE/NNSA technology transfer policies and relevant management and operating contract provisions.

2. For each situation, the mechanisms should be those most supportive of the IPP objectives.

3. For each situation, a comprehensive strategy should be devised that recognizes the efficacy of employing multiple technology transfer mechanisms over the sequence of activities that comprise the entire technology transfer cycle. For example, publication of technical papers in scientific or technical journals may be an appropriate mechanism to create awareness of the commercialization opportunity, followed by a CRADA or personnel exchange as mechanisms most appropriate to stimulate additional technical work to advance a particular application.

4. IPP activities are to be coordinated for maximum leverage with other programs sponsored by the U.S. Government or the private sector.

24. Evaluation and Oversight

Each IPP participant must establish and document criteria and data to measure a project's contribution to the complete IPP effort. Mechanisms for oversight will be instituted at the appropriate National Laboratory, DOE/NNSA Operations Office, and IPP Program Office.

The IPP Program Office is responsible for providing policy guidance and the conduct of oversight and evaluation of the program.

National Laboratories are responsible for the conduct and day-to-day management of the program under applicable statutes, DOE/NNSA policy and contracts. National Laboratories are responsible for developing, implementing and managing individual IPP projects.

Specific metrics will be used to monitor the IPP program. ILAB representatives and USIC shall

maintain data which will facilitate monitoring the following metrics. If this data is maintained in the Lotus Notes Information System, it should be updated on a monthly basis.

- Worldwide sales resulting from commercialized IPP projects.
- Number of weapons scientists and engineers engaged in non-weapons related scientific and commercial projects.
- Level of financial contribution of USIC members in cost-shared projects.
- Level of outside private financing secured by USIC members specifically for commercialization of IPP projects.
- Number of U.S. companies and universities that are members of USIC.
- Small and disadvantaged business involvement.
- Number of inventions reported under CRADAs and subcontracts.
- Number of licenses and patents issued as a result of the IPP.
- Number of articles or news events generated by the IPP-funded project. (Note: ILAB representatives should furnish copies of any such articles or press releases to the IPP Director.)
- Number of prestigious awards received by National Laboratories based on IPP projects.
- Other government agency and private sector involvement.
- Positive feedback from NIS participants on the benefits of the IPP.
- Publications in peer-reviewed journals.

ILAB Representatives are the repository for all IPP projects at their Laboratory. ILAB Representatives should maintain an archive of technical results, commercial results, financial data, contracting data, operational notes and other records that document the life of any IPP activity. During any period of succession, the outgoing ILAB Representative should take steps to transfer this data to the incoming ILAB Representative.

General Guidelines:

1. IPP activities must be adequately documented and available for review.

2. Standard accounting and auditing procedures shall be used. Copies of records documenting the payment of IPP funds for deliverables should be retained.

3. Copies of contracts, subcontracts and CRADA's should be retained.

4. ILAB Representatives are responsible for identifying and labeling any documents that contain proprietary data.

5. All trip reports associated with the project should be retained at the Laboratories. Copies should be furnished to the IPP Program Office.

6. Copies of research results, technical reports, notes, technical publications, drawings, photos or any other technical data that documents the progress and outcome of the project.

7. Reports or physical samples that document the completion of deliverables should be retained.

8. Any press releases, brochures or any other promotional items should be retained. Copies should be furnished to the IPP Program Office.

9. For T-2 projects, ILAB Representatives should retain copies of the business plans, license agreements, corporate press materials, corporate charters, bankruptcy notification or any other documentation relating to the roles, and capabilities of the Industry Partner.

10. USIC will provide copies of any project information they may retain to the appropriate ILAB Representative.

11. Copies of any instructions from DOE/NNSA headquarters, including the approval letter, should be retained.

12. Copies of any correspondence from the NIS institute, IPP Industrial Partners or DOE/NNSA Operations Offices.

13. Each ILAB Representative will prepare a final report upon completion of each IPP project within thirty days of project completion. In general, each final report will summarize technical results, commercial results, funding history, interactions with the NIS Institute and the IPP Industry Partner(s), metrics (patents, publications, FTE's etc.), next steps for achieving full commercialization and lessons learned.

25. Equipment Accountability

Equipment may be temporarily provided by the Government between the CRADA partner and the National Laboratory during the period of performance of a CRADA. With DOE/NNSA approval, equipment may be purchased specifically to support a CRADA. The CRADA joint work statement should address any purchasing or providing of equipment.

Funds provided to the participating NIS Institute under the National Laboratory contract with an NIS Institute may be used to purchase equipment in-country by the NIS Institute.

Operations Offices may transfer, on a case-by-case basis, the ownership, title and responsibility of the furnished property to the relevant NIS governments or their agents. The transfer of U.S.-financed property from DOE/NNSA (its contractors or subcontractors), will occur upon receipt of the property in country by the NIS Institute.

Operations Offices are to obtain and document the concurrence of the IPP Director for all property in advance of shipment. These requests should be accompanied by a certification that the property will not be used for military purposes and meets U.S. Government export control requirements and other applicable requirements.

General Guidelines:

1. Existing DOE/NNSA policies and procedures will be used to account for equipment used at a National Laboratory in support of a CRADA.

2. Disposition of equipment purchased specifically to support a CRADA will be negotiated and stated in the joint work statement.

3. Equipment temporarily provided between the National Laboratory and the CRADA partner will revert back to the original owner at the end of the performance period. Requests for exceptions must be submitted to the responsible DOE/NNSA contracting officer for approval.

4. Equipment temporarily provided by either the National Laboratory or the CRADA partner will be identified in the joint work statement which will be updated, as needed, during the performance period of the CRADA.

5. Equipment that is expected to be procured to support the CRADA effort will be identified by the National Laboratory in the joint work statement. Justifications shall be provided for large or unusual purchases.

6. The National Laboratory must avoid creating the appearance of a funds-out CRADA, which is prohibited, when procuring goods and services from a CRADA partner for a non-CRADA activity.

7. Equipment to be provided to the participating NIS Institute will be identified in the contracting mechanism with the NIS Institute. Export control requirements must be met.

26. Conflicts of Interest

Conflicts of interest have the potential to jeopardize the integrity of the IPP. Program participants must be attentive and avoid real, or perceived, conflict of interest. Each program participant is responsible for the identification, resolution, and management of conflict of interest matters.

General Guidelines:

1. Federal employees will be governed by applicable laws, regulations, and standards of conduct.

2. DOE National Laboratories must develop written policies and procedures that are consistent with contractual requirements that fully address actual or potential conflicts of interest.

- These written policies and procedures must be broad enough to encompass all possible instances or conditions where conflict of interest may result. From these written policies and procedures will evolve effective internal practices and mechanisms.

- The individuals involved and their management are ultimately responsible for the ethical and legal implementation of conflict of interest policies and procedures.

3. To the extent required by the Financial Assistance Agreement, USIC shall develop written policies and procedures that fully address actual or potential conflicts of interest.

4. NIS Institutes should be made aware of and advised to avoid the types of conflict of interest situations that would be an embarrassment to the IPP.

5. Failure to meet appropriate conflict of interest requirements may be grounds for immediate termination of a project.

27. Financial Management and Reporting

In order to maintain full accountability, the IPP Director may designate a member of the IPP Staff to act as a financial officer who will maintain all financial records and execute financial activities under the supervision of the IPP Director. The ILAB Chair, ILAB Representatives and any other IPP program element receiving program funds will submit timely and accurate data concerning the

disposition of IPP funds allocated to projects or activities under their supervision.

General Guidelines:

1. The IPP Finance Officer is the designated point of contact for coordinating all IPP financial and budget activities. Copies of all financial reports should be sent directly to this office.

2. On a monthly basis, all financial and project data should be updated in the Lotus Notes Information System. Each ILAB Representative is responsible for maintaining the data for his/her own National Laboratory.

3. ILAB Representatives should provide a monthly report on the disposition of all funds allocated to their control. While specific details should be coordinated with the IPP Finance Officer who will provide reporting requirements which reflect programmatic needs.

4. Project mortgages should be delineated during proposal submissions and in any relevant financial reports including monthly reports. ILAB Representatives should maintain accurate records concerning the number and amount of mortgage funds needed to complete IPP-approved activities.

5. All instructions concerning the disposition of funds will be issued in writing by the IPP Director.

6. Funds allocated for a specific purpose cannot be re-allocated for any other project or activity without written instruction from the IPP Director.

7. Funds remaining from a completed or canceled IPP activity will be reported to the IPP Finance Officer and returned to pre-positioned funding for re-allocation to other IPP activities upon approval of the IPP Director.

8. The IPP Director will determine the level of pre-positioned funding and the schedule for fund distribution. Pre-positioned funds may not be allocated or spent on IPP projects or activities until authorized in writing by the IPP Director.

9. Unless otherwise directed, ILAB Representatives should use their oldest, uncommitted funds first.

Appendix A

AL 95-14 (11/17/95)
Attachment 2

INTELLECTUAL PROPERTY TERMS FOR NIS-IPP SUBCONTRACTS

I. NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT.

The Contractor shall report to the U.S. Government through the Laboratory, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge and shall furnish to the U.S. Government, at the expense of the U.S. Government, when requested by the U.S. Government or the Laboratory all evidence and information in possession of the Contractor pertaining to such claim or any resulting suit.

II. PATENT RIGHTS

(a) Definitions

(1) "Subject Invention" means any invention or discovery of the Laboratory or the Contractor conceived or first actually reduced to practice in the performance of work under "NIS-IPP project no. _____" for Thrust I projects and "USIC IPP project no. ____" for Thrust II projects] of which this contract is a part.

(2) "Patent Counsel" means the DOE Patent Counsel assisting the Laboratory.

(b) Invention disclosures and reports

(1) The Contractor shall furnish the Patent Counsel and the Laboratory:

(i) A written report containing full and complete technical information concerning each Subject Invention of the Contractor within 2 months after conception or first actual reduction to practice whichever occurs first in the course of or under this contract, but in any event prior to any on sale, public use, or public disclosure of such invention known to the Contractor. The report shall identify the contract and inventor

and shall be sufficiently complete in technical detail and appropriately illustrated by sketch or diagram to convey to one skilled in the art to which the invention pertains a clear understanding of the nature, purpose, operation, and to the extent known, the physical, chemical, biological, or electrical characteristics of the invention.

(ii) Upon request, but not more than annually, interim reports on a DOE approved form listing Subject Inventions of the Contractor for that period and certifying that all Contractor Subject Inventions have been disclosed or that there were no such inventions; and

(iii) A final report on a DOE-approved form within 3 months after completion of the contract work listing all Contractor Subject Inventions and certifying that all Contractor Subject Inventions have been disclosed or that there were no such inventions.

(2) The Contractor agrees that the U.S. Government and the Laboratory may duplicate and disclose Contractor Subject Invention disclosures and all other reports and papers furnished or required to be furnished pursuant to the contract.

(c) Rights to Subject Inventions

(1) The Laboratory, pursuant to its Prime Contract [insert Prime Contract number] with the U.S. DOE, has the right to elect title to Subject Inventions of the Laboratory. Such election shall be in accordance with the terms of the Laboratory's Prime Contract.

(2) Pursuant to U.S. DOE's Class Waiver W(C) 94-010 of patent rights in the New Independent States (NIS) of the Former Soviet Union for inventions made by NIS institutes= employees in the course of or under agreements entered into pursuant to the Fiscal Year 1994 Foreign Appropriations Act (PL 103-87), the Contractor has the right to title to Subject Inventions of the Contractor in the New Independent States.

(3) The Contractor retains title to all Subject

Inventions by its employees, and hereby grants to the Laboratory exclusive license rights in Contractor's Subject Inventions in all countries other than the New Independent States. Such grant includes the right to sublicense and the right to file patent applications and to execute all documents necessary to obtain patents in said countries. Subject Inventions jointly made by Contractor and Laboratory employees shall be jointly owned. The Contractor's rights to patent royalties from the Laboratory are set forth in paragraph (e) below.

(4) The Contractor and Laboratory acknowledge that the U.S. DOE may obtain title to each Subject Invention for which a patent application or applications are not elected or filed by the Contractor and/or the Laboratory and for which any issued patents are not maintained by the Contractor and/or the Laboratory. To the extent that the U.S. DOE acquires title to a Subject Invention, Contractor and the Laboratory agree to take such actions and execute all appropriate documents (at no expense to Contractor) to enable the U.S. DOE to file, prosecute and maintain patent applications thereon.

(5) The Contractor and the Laboratory acknowledge that the U.S. Government retains a non-exclusive, nontransferable, irrevocable, paid-up license to practice or to have practiced by or on behalf of the U. S. Government every Subject Invention throughout the world.

(6) For each Subject Invention that the Laboratory elects title thereto pursuant to paragraph (1) above, the Laboratory agrees to cause a patent application to be filed and prosecuted in the U.S. Patent Office on said Subject Invention. Further, the Laboratory may cause to be filed and prosecuted foreign patent applications(s) on said Subject Invention.

(7) The Contractor certifies that it has not and will not enter into an agreement with a third party that conflicts with this contract. To the extent that any subsequent agreement between the Contractor and a third party conflicts with the

allocation of rights in Contractor Subject Inventions under this contract, the Contractor agrees that the terms of this contract will supersede the terms of such agreement.

(8) The Laboratory agrees to provide Contractor copies of patents issued on Subject Inventions.

(d) Publication

In order that information concerning scientific or technical developments conceived or first actually reduced to practice in the course of or under the contract is not prematurely published so as to adversely affect patent interest of Laboratory or DOE, the Contractor agrees to submit to the Laboratory for patent review a copy of each paper 60 days prior to its intended publication date. The Contractor may publish such information after a 60-day period following such submission or prior thereto if specifically approved by the Laboratory, unless the Contractor is informed in writing within the 60-day period, that in order to protect patentable subject matter, publication must further be delayed. In this event, publication shall be delayed up to 100 days beyond the 60-day period or such longer period as mutually agreed to.

(e) Royalty Sharing

To the extent that the Laboratory licenses any Subject Invention to a third party which results in income therefrom, Contractor and the Laboratory agree to share the net income therefrom fifty (50%) to Contractor and fifty percent (50%) to the Laboratory. Net income is gross income less any expenses and costs associated with the licensing of a Subject Invention including, but not limited to, the cost of preparing, prosecuting and maintaining patents covering said Subject Inventions. The Laboratory agrees to provide to the Contractor annual reports setting forth the licensing activity for Subject Inventions by the Laboratory during the reporting period. The Laboratory agrees that any agreement to license a Subject Invention will be subject to the royalty sharing agreement between the Laboratory and Contractor.

(f) Employee Agreements

The Contractor shall obtain patent agreements to

effectuate the provisions of this Patent Rights clause from all persons in its employ who perform any part of the work under this contract except non-technical personnel, such as clerical employees and manual laborers.

III. RIGHTS IN DATA - GENERAL

(a) Definitions

(1) "Computer software," as used in this clause, means computer programs, computer data bases, and documentation thereof.

(2) "Data," as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing, or management information.

(3) "Form, fit, and function data," as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

(4) "Limited rights data," as used in this clause, means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.

(5) "Technical data," as used in this clause, means data (other than computer software) which are of a scientific or technical nature.

(6) "Restricted computer software," as used in this clause, means computer software developed at

private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software; including minor modifications of such computer software.

(7) "Unlimited rights," as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so.

(8) "Limited rights," as used in this clause, means the rights of the U.S. Government and the Laboratory in limited rights data as set forth in the Limited Rights Notice of paragraph (e)(2) of this clause.

(9) "Restricted rights," as used in this clause, means the rights of the U.S. Government and the Laboratory in restricted computer software, as set forth in the Restricted Rights Notice of paragraph (e)(3) of this clause.

(b) Allocations of rights

(1) Except as provided in paragraph (c) below regarding copyright, the U.S. Government and the Laboratory shall have unlimited rights in-

(i) Data first produced in the performance of this contract;

(ii) Form, fit, and function data delivered under this contract;

(iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair items, components, or processes delivered or furnished for use under this contract; and

(iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer

software in accordance with paragraph (e) below.

(2) The Contractor shall have the right to-

(i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of the contract, except to the extent provided in paragraph (d) below or otherwise expressly set forth in this contract;

(ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (e) below; and

(iii) Establish claim to copyright subsisting in data first produced in the performance of this contract to the extent provided in paragraph (c) below.

(c) Copyright

(1) The U.S. Government has agreed that the Parties may assert copyright in any of their data first produced in the performance of "NIS-IPP project no. _____" for Thrust I projects and "USIC IPP project no._____" for Thrust II projects; accordingly, each Party has the right to assert its copyright in such data.

(2) The Contractor retains title to copyrights in all copyrighted works produced solely by its employees during the performance of this contract. The Contractor hereby grants to the Laboratory an exclusive right and license under such copyrights in all countries other than the New Independent States. Such grant includes the right to sublicense and the right to execute all documents necessary to register the copyrights in said countries. Copyrighted works jointly created by Contractor and Laboratory employees shall be jointly owned. The Contractor's rights to copyright royalties from the Laboratory are set forth in paragraph (f) below.

(3) The Parties acknowledge that the U.S. Government has for itself and others acting on its behalf, a

royalty-free, nonexclusive, irrevocable worldwide copyright license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the U.S. Government, all copyrightable works produced in the performance of this contract.

(4) For all copyrighted computer software produced in the performance of this contract, the Party owning the copyright shall provide the source code, an expanded abstract, and the object code and the minimum support documentation needed by a competent user to understand and use the software to DOE=s Energy Science and Technology Center, P.O. Box 1020, Oak Ridge, TN 37831. The U.S. Government shall have unlimited rights in said expanded abstract.

(5) The Parties agree to place copyright and other notices, as appropriate for the protection of copyright, in human-readable form onto all physical media, and in digitally encoded form in the header of machine readable information recorded on such media such that the notice will appear in human-readable form when the digital data are off-loaded or the data are accessed for display or printout.

(6) The Contractor shall not, without prior written permission of the DOE via the Laboratory, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contains a copyright notice, unless the Contractor identifies such data and grants to the U.S. Government, or acquires on its behalf, a license of the same scope as set forth in paragraph (3) above, provided, however, that if such data are computer software the U.S. Government shall acquire a copyright license as set forth in paragraph (e)(3) below if included in this contract or as otherwise may be provided in collateral agreement incorporated in or made part of this contract.

(d) <u>Release, publication, and use of data</u>

(1) The Contractor shall have the right to use, release to others, reproduce, distribute, or

publish any data first produced or specifically used by the Contractor in the performance of this contract, except to the extent such data may be subject to the U.S. federal export control or national security laws or regulations, or unless otherwise provided below in paragraph (d)(2) or expressly set forth in this contract. This paragraph (d)(1) can be deleted if there will be no work performed in the U.S. by NIS scientists and engineers.

(2) The Contractor agrees that to the extent it receives or is given access to data necessary for the performance of this contract which contain restrictive markings, the Contractor shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by DOE (with notice to the Laboratory).

(e) Protection of limited rights data and restricted computer software

(1) When data are specified to be delivered under this contract and qualify as either limited rights data or restricted computer software, if the Contractor desires to continue protection of such data, the Contractor shall withhold such data and not furnish them to the Laboratory or the U.S. Government under this contract except as provided for in paragraphs (2) and (3) below. As a condition to this withholding, the Contractor shall identify the data being withheld and furnish form, fit, and function data in lieu thereof. Limited rights data that are formatted as a computer data base for delivery to the Laboratory or the U.S. Government are to be treated as limited rights data and not restricted computer software.

(2) Limited Rights [This paragraph can be deleted if it is determined that there is no necessity for delivery of Limited Rights Data under the contract.]

The Laboratory or DOE may require by written request the delivery of limited rights data that has been withheld or would otherwise be withholdable. If delivery of such data is so required, the Contractor may affix the following legend to the data and the Laboratory and the U.S.

Government will thereafter treat the data in accordance with such Notice:

LIMITED RIGHTS NOTICE

These data are submitted with limited rights under Department of Energy Prime Contract No. and [Name of Laboratory] Contract No._____. These data may be reproduced and used by the Laboratory or the U.S. Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Laboratory or the U.S. Government; except that the Laboratory or Government may disclose these data outside the Laboratory or the U.S. Government for use and evaluation by other contractors and/or entities participating in the Government's program of which this contract is a part provided that the Laboratory or the U.S. Government makes such disclosure subject to prohibition against further use and disclosure.

(End of Notice)

(3) Restricted Rights [This paragraph can be deleted if it is determined that there is no necessity for the delivery of Restricted Computer Software under the contract.]

The contract may identify and specify the delivery of restricted computer software, or the Laboratory or DOE may require by written request the delivery of restricted computer software that has been withheld or would otherwise be withholdable. If delivery of such computer software is so required, the contractor may affix the following legend to the computer software and the Laboratory and the U.S. Government will thereafter treat the computer software in accordance with the Notice:

RESTRICTED RIGHTS NOTICE

(1) This computer software is submitted with restricted rights under Department of Energy Prime Contract No. _____ and [Name of Laboratory] Contract No. _____. It may not be used, reproduced, or disclosed by the Laboratory or the U.S. Government except as otherwise expressly stated in the

contract.

(2) This computer software may be -

(a) Used or copied for use in or with the computer or computers for which it was acquired, including use at any Government installation to which such computer or computers may be transferred;

(b) Used or copied for use in a backup computer if any computer for which it was acquired is inoperative;

(c) Reproduced for safekeeping (archives) or backup purposes;

Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software are made subject to the same restricted rights;

(e) Disclosed to and reproduced for use by any U.S. Government contractors in accordance with subparagraphs (2)(a) through (d) of this Notice, provided the Laboratory or the U.S. Government makes such disclosure or reproduction subject to these restricted rights; and

(f) Used or copied for use in or transferred to a replacement computer.

(3) If this computer software is published copyrighted computer software, it is licensed to the U.S. Government without disclosure prohibitions, with the minimum rights set forth in paragraph (2) of this Notice.

(4) This Notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of Notice)

(f) Royalty Sharing

To the extent that the Laboratory licenses to a third party any copyrighted work produced in the performance of this contract which results in income therefrom, Contractor and the Laboratory agree to share the net income therefrom fifty percent (50%) to the Contractor and fifty percent (50%) to the Laboratory. Net income is gross income less any expenses and costs associated with the licensing and protection of the copyrighted work including, but not limited to, the costs of obtaining and maintaining the copyright. The Laboratory agrees to provide to the Contractor annual reports setting forth the licensing activity for said copyrighted works by the Laboratory during the reporting period. The Laboratory agrees that any agreement to license a copyrighted work produced in the performance of this contract will be subject to the royalty sharing agreement between the Laboratory and Contractor.

(g) Employee Agreements

The Contractor shall obtain agreements to effectuate the provisions of this Rights in Data clause from all persons in its employ who perform any part of the work under this contract.

IV. ADDITIONAL DATA REQUIREMENTS [This clause can be deleted if all technical data requirements are known in advance of contracting and are set forth in the statement of work.]

(a) In addition to the data (as defined in Clause III, Rights in Data-General) specified elsewhere in this contract to be delivered, the Laboratory or the DOE may, at any time during contract performance or within a period of 3 years after acceptance of all items to be delivered under this contract, order any data first produced or specifically used in the performance of this contract.

(b) The Rights in Data-General clause included in this contract is applicable to all data ordered under this Additional Data Requirements clause. Nothing contained in this clause shall require the Contractor to deliver any data the withholding of which is authorized by the Rights in Data-General clause of this contract, or data which are specifically identified in this contract as not subject to this clause.

(c) When data are to be delivered under this clause, the Contractor will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.

(d) The DOE via the Laboratory may release the Contractor from the requirements of this clause for specifically identified data items at any time during the 3-year period set forth in paragraph (a) of this clause.

V. BACKGROUND INTELLECTUAL PROPERTY [This clause can be deleted if it is determined that no Contractor Background Intellectual Property is to be used during the performance of the Contact.]

"Background Intellectual Property" is intellectual property (e.g., inventions, software, copyrights, trademarks) belonging to the Contractor that was in existence before this contract. A background invention is an invention or discovery of the Contractor that was conceived outside of this contract and not first actually reduced to practice (i.e., demonstrated) under this contract. Contractor has identified the following Background Intellectual Property that may be used in the performance of this contract:

Appendix B

Detailed Guidance for the Treatment of Intellectual Property under the Initiatives for Proliferation Prevention (IPP) Program with the New Independent States (NIS)

National Nuclear Security Administration

U.S. Department of Energy

December 2001

Foreword

This document is a supplement to the "General Program Guidance for the New Independent States (NIS) Initiatives for Proliferation Prevention (IPP) Program." Its purpose is to provide detailed guidance on contractual language and administration of agreements such as contracts,

subcontracts, CRADAs, science center project agreements, and licenses, and to recommend procedures for the protection and handling of intellectual property, generated information, and proprietary information. DOE/NNSA's goal is for all IPP Program participants to implement this guidance, thereby achieving greater effectiveness in the program and greater consistency in the management and administration of agreements and intellectual property.

This Detailed Guidance will be maintained to reflect operational experience and new requirements. Changes must be coordinated with and approved by the IPP Program Director, National Nuclear Security Administration (NNSA), Department of Energy.

This Detailed Guidance was prepared by Daryl Grzybicki of the Lawrence Livermore National Laboratory and Jud Hightower of DOE/NNSA. Comments and suggestions for improving the guidance are welcome. Please direct comments to:

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Exhibit C. Record of Invention Form 22

I. Glossary

CRADA Cooperative Research and Development Agreement. This contractual agreement is between a DOE/NNSA Laboratory and a USIC member to perform collaborative research

DOE Department of Energy, an executive department of the U.S. Government

IPP-Institute Contract The contractual agreement between DOE/NNSA or a Laboratory and an NIS institute, i.e., a contract between DOE/NNSA and an NIS institute, a Laboratory subcontract with an NIS institute, or a

project agreement between DOE/NNSA, an NIS institute, and either the ISTC or the STCU

ISTC International Science and Technology Center, an intergovernmental organization in Moscow, Russian Federation

Laboratory DOE/NNSA National Laboratory/Facility participating in the IPP Program (i.e., Allied Signal Kansas City Plant, Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering & Environmental Laboratory, Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest National Laboratory and Sandia National Laboratories)

MOU The current Memorandum of Understanding between DOE/NNSA and USIC on the IPP Program

IPP Program New Independent States of the Former Soviet Union - Initiatives for Proliferation Prevention Program

IPP Program participants USIC, USIC members, Laboratories, DOE/NNSA, ISTC, STCU and NIS institutes

NNSA National Nuclear Security Administration, a semi-autonomous administration within DOE

STCU Science and Technology Center in Ukraine, an intergovernmental organization in Kiev, Ukraine

USIC United States Industry Coalition, Inc.

II. Intellectual Property Concepts

All IPP Program participants are responsible for protecting the intellectual property developed under the IPP Program. Additionally, the IPP Program participants should identify and take steps necessary to protect the pre-existing technology of the NIS institutes. DOE granted a class patent waiver (W(C) 94-010) to equitably allocate the rights of NIS institute inventions made under subcontracts between Laboratories and NIS institutes. The other types of IPP-Institute Contracts include essentially the same allocation of rights set forth in the class patent waiver, with the Laboratories receiving either title or the exclusive rights to NIS institute inventions outside the NIS. All agreements between the IPP Program participants will reflect this allocation of rights and other associated obligations set forth in the class patent waiver.

The purpose of this section is to provide basic definitions and concepts that are needed to

understand and implement the General Program Guidance for the IPP Program and this Detailed Guidance.

Intellectual property:

Patents, copyrights, trademarks, mask works, and other forms of comparable property rights protected by federal law and foreign counterparts.

Patent:

A patent is a right granted by the U.S. Patent and Trademark Office (or analogous foreign office) to a new and useful invention. To obtain patent protection, a U.S. patent must be applied for within one year of any publication of the invention. Caveat: a written or verbal publication describing the invention anywhere in the world may destroy the ability to apply for a patent outside the U.S. Therefore, the timing of publications or presentations describing an invention is extremely important to preserve patent rights.

Copyright:

A copyright is a right beginning at the time of creation of a work of authorship, such as written material, a software code, a film or a drawing. Although formal registration is not required at the U.S. Copyright Office, registration is recommended to secure all rights and remedies available. The allocation of copyrights under the IPP Program is provided in the IPP-Institute Contracts and CRADAs.

Background intellectual property:

Intellectual property that was in existence before an IPP-Institute Contract or CRADA or was first produced outside of such agreement. Background inventions must have been conceived outside of the agreement and not first actually reduced to practice (i.e., demonstrated) under the agreement.

Proprietary information:

Proprietary information and data are recorded information developed at private expense that embody trade secrets, or commercial or financial information, whose content is considered privileged or confidential by its owner. The proprietary information and data are not generally known or available from sources other than the provider, and are not available from anyone without a duty to maintain their confidentiality.

Information generated by the Laboratories is generally not developed at private expense, and therefore is not considered proprietary. But DOE/NNSA and the Laboratories can withhold from the public, for a reasonable time, information that would disclose an invention in order to file a patent application and preserve patent rights.

In the IPP-Institute Contracts, the proprietary information of the NIS institutes may be marked as "Limited Rights Data" or "Restricted Computer Software."

III. Proposal Development Stage

A. Nondisclosure Agreements

1) Nondisclosure agreements are used to protect the exchange of proprietary information (e.g., trade secrets) and potentially patentbable information. The parties signing the agreement promise not to use or disclose the designated information to a third party for a specified period of time. For example, when USIC members or Laboratory personnel are receiving information about pre-existing technology at the NIS institutes, nondisclosure agreements should be in place to protect the NIS institutes' proprietary information and unpatented pre-existing technology.

   Public disclosure of an invention, either verbally or in writing, can jeopardize obtaining patent rights to the invention. Ideally, a patent application should be filed before any public disclosure of an invention. A verbal or written publication of the invention will completely bar filing in most countries outside the U.S. A verbal disclosure will not bar filing in the U.S., but any written publication (e.g., viewgraphs, journal articles, drawings) will establish a time period of one year in which a patent application must be filed. If a patent application is not filed within one year of the publication, then U.S. patent rights are lost.

   Disclosure of an invention under a nondisclosure agreement is not public and maintains the confidentially of the disclosure. This confidential disclosure preserves the right to file outside the U.S. and does not start the one-year clock running for filing for U.S. patent rights. Therefore, it is extremely important for the IPP Program participants to use nondisclosure agreements when discussing potentially patentable technology (for which patent applications have not been filed) to maximize future worldwide patent protection.

2) Federal government employees (e.g., DOE/NNSA employees) are prohibited under 18 U.S.C. 1905 from wrongfully disclosing proprietary information and data and therefore do not sign nondisclosure agreements. Laboratory employees may not be authorized to sign these agreements. Only Laboratory personnel who have been delegated the authority to sign on behalf of the Laboratory should sign nondisclosure agreements.

3) Information subject to nondisclosure agreements should be marked and dated. Verbally transmitted information should be reduced to writing by the provider and appropriately marked and dated. Electronic mail and faxes may not be secure methods of transmitting this information. See Section VII for further guidance on handling proprietary and patentable information.

4) Laboratory personnel who have been given access to existing technology under a nondisclosure agreement must be careful not to improperly disclose the information in discussions with other potential collaborators.

5) A sample nondisclosure agreement (Exhibit A) is provided in Section IX. This agreement should be tailored to suit the needs of the IPP Program participants exchanging proprietary or potentially patentable information.

B. Proposals

1) The Laboratories and USIC members should attempt to identify in the proposals whether the NIS institute has pre-existing (background) technology. Efforts will be made under the IPP Program to further identify and protect background intellectual property of the NIS institutes.

2) Proposals should be properly marked if they contain descriptions of the IPP Program participants' unprotected pre-existing technology.

3) USIC members should become familiar with the Model CRADA master terms and conditions and the allocation of intellectual property under IPP Program in the proposal stage to avoid delays later in the approval process. USIC should provide copies of all relevant documents (e.g., MOU, Model CRADA, class patent waiver, General Program Guidance, Detailed Guidance) to new members.

4) The Laboratories should ensure the USIC members and NIS institutes are acquainted with the intellectual property terms of the agreements (e.g., CRADAs, subcontracts, contracts, science center project agreements) early in the proposal stage. However, DOE/NNSA recognizes that the Laboratories may not be able to certify that all parties in a project have reached an agreement on intellectual property rights at the proposal stage. Laboratories will meet the minimum IPP Program requirements set forth in the MOU.

5) For the IPP-Institute Contracts, DOE/NNSA and the Laboratories should determine in advance of entering into the agreement what technical data should be delivered under the statement of work. The IPP-Institute Contract would then not require the additional data rights clause (a clause that would require the NIS institute to deliver additional requested data first produced under the IPP-Institute Contract for a period of three years after the acceptance of all items to be delivered under the IPP-Institute Contract). However, if it is not possible to ascertain all actual needs for technical data in advance of the IPP-Institute Contract, then the additional data rights clause should be included.

C. Conflicting and Separate Independent Agreements

1) The Laboratories should inquire of the USIC members and the NIS institutes whether they have separate agreements concerning intellectual property that could potentially conflict with the terms of the CRADAs or IPP-Institute Contracts. The proposals should discuss any potentially conflicting agreements, and the IPP Program Director should be notified.

2) Many of the IPP Program projects involve contractual agreements in addition to the IPP-Institute Contract. The proposals should identify all such agreements related to the project, e.g., subcontracts between the USIC member and the participating NIS institute or a third party. When either DOE/NNSA or the Laboratory and the USIC member have agreements with the NIS institute, the work under these agreements should not conflict or be redundant, and the NIS institute must ensure that the work done under these different agreements is segregated.

3) The development of intellectual property may take place under several agreements with different funding sources. If other agreements or other funding sources were or may be involved in developing the intellectual property that is generated under an IPP Program project, this information should be clearly presented in the proposal and conveyed to the IPP Program Director.

IV. IPP-Institute Contract Stage

A. IPP-Institute Contract Language

1) Either DOE/NNSA or the Laboratory may enter into an IPP-Institute Contract with a participating NIS institute to perform work; the IPP-Institute Contract may be done in support of a CRADA between the Laboratory and a USIC member. DOE/NNSA Headquarters has recommended simplified language for the IPP-Institute Contract intellectual property provisions, which omits the provisions that are not applicable to NIS projects. Some of the recommended language is provided below in this section A. (Note: the quoted language is for Laboratory subcontracts with NIS institutes where the NIS institute is identified as the "Contractor," but other terms may be used to identify the NIS institute, e.g., "Recipient," and the Laboratory, e.g., "Collaborator/Technical Monitor," in other types of IPP-Institute Contracts).

2) To alleviate problems some NIS institutes have had with taxes, etc. when the IPP-Institute Contract is a Laboratory subcontract and is titled "Subcontract," the Laboratories should consider labeling the subcontract as an "agreement," e.g., "Material Support Agreement."

3) The IPP-Institute Contract should set forth the allocation of intellectual property rights and distribution of net royalties as stated in the class patent waiver and a definition of net income. Examples of IPP-Institute Contract language:

- "Pursuant to U.S. DOE's Class Patent Waiver No. W(C) 94-010 of patent rights in the New Independent States (NIS) of the Former Soviet Union for inventions made by NIS institutes' employees in the course of or under agreements entered into pursuant to the Fiscal Year 1994 Foreign Appropriations Act (PL 103-87), the Contractor has the right to elect title to Subject Inventions of the Contractor in the NIS. The Laboratory has the right to elect title to Subject Inventions of the Contractor in the United States and third countries excluding the NIS."

- "To the extent that the Laboratory licenses any Subject Invention to a third party that results in income, Contractor and the Laboratory will share the net income: fifty percent (50%) to Contractor and fifty percent (50%) to the Laboratory. Net income is gross income less expenses and costs associated with the licensing of a Subject Invention and includes but is not limited to the cost of preparing, prosecuting, and maintaining patents covering the Subject Inventions. The Laboratory will provide the Contractor with annual reports on the licensing activity for Subject Inventions by the Laboratory".

- The All Russian Scientific Research Institute of Experimental Physics (VNIIEF) has requested that the IPP-Institute Contract also include an agreement by the Laboratory that licenses for Subject Inventions specify the royalty sharing arrangement:

  "The Laboratory agrees that any agreement to license a Subject Invention will reflect the royalty sharing agreement between the Laboratory and Contractor."

4) The IPP-Institute Contract should also set forth the allocation of copyrights, the distribution of net royalties from licensing copyrights, and a definition of net income. IPP-Institute Contract language:

   - "Contractor will, upon written request of the Laboratory, assign to the Laboratory the Contractor's entire right, title and interest to copyright in all countries other than the NIS in its associated copyrightable work produced in the performance of this Contract."

   - "To the extent that the Laboratory licenses to a third party any copyrighted work produced in the performance of this contract that results in income, Contractor and the Laboratory will share the net income: fifty percent (50%) to the Contractor and fifty percent (50%) to the Laboratory. Net income is gross income less any expenses and costs associated with the licensing and protection of the copyrighted work and includes but is not limited to the costs of obtaining and maintaining the copyright. The Laboratory will provide the Contractor with annual reports on the licensing activity for the copyrighted works by the Laboratory."

   - VNIIEF has requested that the IPP-Institute Contract also include an agreement by the Laboratory that copyright licenses specify the royalty sharing arrangement:

     "The Laboratory agrees that any agreement to license a copyrighted work produced in the performance of this contract will reflect the royalty sharing agreement between the Laboratory and Contractor."

5) At least one of the NIS institutes (VNIIEF) has requested a license to practice the institute's inventions in the non-NIS countries in order to conduct further non-commercial research and development. The IPP-Institute Contract may provide a license in NIS Subject Inventions to the NIS institute for continuing research and development outside the NIS. Sample language:

   - "The Laboratory grants to the Contractor a non-exclusive, nontransferable, royalty-free, paid-up license in Contractor Subject Inventions in non-NIS countries for non-commercial research and development purposes."

6) The IPP-Institute Contract should specifically provide for identification of background intellectual property and proprietary information of the NIS institute. Standard IPP-Institute Contract language requests identification of "limited rights data" and "restricted computer software." IPP-Institute Contract language requesting identification of background intellectual property:

"Background intellectual property is intellectual property (e.g., inventions, software, copyrights, trademarks) belonging to the Contractor that was in existence before this contract. A background invention is an invention or discovery of the Contractor that was conceived outside of this contract and not first actually reduced to practiced (i.e., demonstrated) under this contract. Contractor has identified the following background intellectual property that may be used in the performance of the contract:

_____ "

7) Under the class patent waiver, DOE has allocated the rights to NIS institute inventions under the IPP Program. Therefore, the patent rights clauses in the IPP-Institute Contract cannot be superseded by any intellectual property agreement the NIS institute may have with a third party (including a USIC member). To ensure that the IPP-Institute Contract terms take precedence, the NIS institute should be required to certify that it has not entered into any previous contracts that conflict with the IPP-Institute Contract. Suggested language:

   - "The Contractor certifies that it has not and will not enter into an agreement with a third party that conflicts with this contract. To the extent that any subsequent agreement between the Contractor and a third party conflicts with the allocation of rights in Contractor Subject Inventions under this contract, the Contractor agrees to that the terms of this contract will supersede the terms of such agreement."

8) For the IPP-Institute Contract, DOE/NNSA and the Laboratories should determine in advance of entering into the agreement what technical data should be delivered and set forth these requirements in the statement of work. The IPP-Institute Contract would then not require the additional data rights clause. However, if it is not possible to ascertain all actual needs for technical data in advance of the IPP-Institute Contract, then the additional data rights clause should be included.

B. Translation

1) The IPP-Institute Contract should be both in English and the pertinent country language, if possible.

C. Contract Administration

1) The patent and data rights clauses in the IPP-Institute Contract require reporting of inventions and pre-publication review. To satisfy these requirements, the following is recommended:

   - Periodic written requests from the Laboratory to the NIS institute (e.g., every six months) for status of inventions or software development;

   - Final payment should be withheld until certifications for intellectual property and personal property are received (see Section IX, Exhibit B for a sample DOE Intellectual Property Certification Form for contract close-out);

- Close-out reports detailing technical development and responses to intellectual property inquiries should be sent to Laboratory Patent Counsel for evaluation;

- Address specifically in the IPP-Institute Contract where invention reports and articles for pre-publication review are to be sent; and

- A record of invention form (translated into the pertinent NIS country language) may be included in the IPP-Institute Contract package. Or, the NIS institute may use its own form, which the Laboratory would have translated. (See Section IX, Exhibit C for a sample Record of Invention Form).

D. Export Control and Classification

1) All IPP Program participants are responsible for meeting applicable classification and export control requirements. Laboratories should ensure that any release of export controlled technical information to NIS personnel, or access to software and intellectual property, or physical access to DOE/NNSA facilities is properly reviewed to satisfy these requirements. The Laboratories and DOE/NNSA should not release classified information or Unclassified Controlled Nuclear Information (UCNI).

2) Instruments, computers, and other equipment provided to the NIS institute must also meet export control requirements.

V. CRADA Stage

A. CRADA Language

1) Special terms and definitions addressing the allocation of intellectual property should be included in the CRADA document, either in the body of the agreement or in an intellectual property appendix. In the following sample CRADA provisions, "Contractor" refers to the Laboratory and "Participant" refers to the USIC member.

<u>Definitions</u>

- Define "NIS Institute":

  "The scientific institute of the New Independent State of the Former Soviet Union that is performing work in support of this CRADA under an IPP-Institute Contract"

- Define "NIS institute Invention":

"Any invention of the NIS Institute conceived or first actually reduced to practice in the performance of work under its IPP-Institute Contract in support of this CRADA"

- Define "NIS Institute Intellectual Property":

  "Patents and copyright of the NIS Institute protected by federal law and foreign counterparts arising from the performance of work under the IPP-Institute Contract in support of this CRADA"

Other provisions

- "To the extent that the Contractor obtains title or authority to license NIS Institute Intellectual Property or Contractor's solely developed CRADA Intellectual Property, the Contractor will grant by separate agreement to the Participant a non-exclusive, royalty-free, non-transferable license in the U.S. and non-NIS countries for its own use in a field of use [specified]."

- "Participant has a first right of refusal [or option] for ___ months following the conclusion of the CRADA to negotiate commercially reasonable licenses for greater rights in NIS Institute Intellectual Property or Contractor's solely developed CRADA Intellectual Property. These licenses will be royalty-bearing, and may include exclusivity, domestic and foreign rights, and sublicensing rights. The U.S. Competitiveness clause will apply to all such licenses."

- "Contractor will share with the NIS institute fifty percent (50%) of the net income received from the Contractor's licensing of Contractor CRADA Intellectual Property or NIS Institute Intellectual Property to which the Contractor obtains title."

2) Under the class patent waiver, DOE has allocated the rights to NIS institute Inventions under the IPP Program. Therefore, the patent rights clauses in the CRADA cannot be superseded by any intellectual property agreement the Participant may have with the NIS Institute. To ensure that the CRADA terms take precedence, the Laboratories should require the Participant to certify that it has not entered into any previous contracts that conflict with the CRADA. Sample CRADA language:

   - "The Participant certifies that it has not and will not enter into any agreement with the NIS institute that conflicts with the terms of this CRADA. To the extent that any subsequent agreement between the Participant and the NIS institute conflicts with the allocation of rights in NIS Institute Inventions under this CRADA, the Participant agrees that the terms of this CRADA will supersede the terms of such agreement."

3) Information generated under the CRADA may be marked by the party creating it

   as Protected CRADA Information. Information generated by the NIS Institute under the IPP-Institute Contract cannot be marked as Protected CRADA Information. In contrast,

information generated by a subcontractor to the Participant may be marked as Protected CRADA Information.

B. Contract Administration

1) The CRADA provisions require reporting of inventions and software and pre-publication review of scientific articles. This periodic reporting and review is extremely important in helping to identify and protect CRADA intellectual property. The Laboratories should ensure that these reports are provided to the Laboratory Patent Counsel.

2) The CRADA provisions also require a final close-out meeting between the Laboratory and the Participant at the completion or termination of the CRADA. This meeting should include Laboratory Patent Counsel to ensure that all intellectual property issues are addressed.

VI. Reporting and Protecting Intellectual Property

A. Reporting Intellectual Property

1) The IPP-Institute Contracts and CRADAs require reporting of inventions and pre-publication reviews of technical articles. All inventions and software development should be reported promptly and as specified in the pertinent agreement. As previously stated in Sections IV (IPP-Institute Contract Stage) and V (CRADA Stage), steps should be taken to satisfy these requirements.

- Periodic written requests (e.g., every six months) from the Laboratory to NIS institutes and USIC members should be made for status reports of inventions and software developments.

- Status and close-out reports describing technical developments should be sent to Laboratory Patent Counsel for evaluation. (See Section IX, Exhibit B for a sample DOE Intellectual Property Certification Form for contract close-out).

- Articles for pre-publication review should be sent to Laboratory Patent Counsel for evaluation.

- A record of invention form (translated into the pertinent NIS country language) should be included in the IPP-Institute Contract package. (See Section IX, Exhibit C for a sample Record on Invention Form).

- Inventions made under the IPP Program should be recorded in the IPP Program database in appropriate intellectual property fields.

B. Protecting Intellectual Property (Foreground and Background)

1) The intellectual property arising from the IPP Program (foreground) should be protected to maximize the commercialization of IPP Program technology.

- Laboratory Patent Counsel should review pre-publication materials and evaluate status and close-out reports to identify patentable and copyrightable subject matter, and then take the necessary steps to perfect intellectual property rights.

- The timing of filing of patent applications is critical to avoid loss of rights for NIS inventions in the NIS.

  - Under Russian patent law, a domestic patent application must be filed at least three months before any foreign filing. Although the Russian Patent Office, ROSPATENT, may waive this requirement, the Laboratory and the NIS institute should coordinate patent filing and exchange applications. The Laboratory should file in the U.S. and in non-NIS countries after the NIS institute files (if choosing to file) in the NIS.

  - The NIS institute will typically file within four months of disclosure. Under Russian patent law, if the institute has not filed within four months, has not assigned title, or has not informed the inventor of a decision to keep the subject matter secret, then the inventor may file in his own name.

- Laboratories should file patent applications on NIS and Laboratory inventions. Limited funds will be available by the IPP Program to help pay for foreign filing. Laboratories should determine the efficacy of registering copyrights.

2) The Laboratories, DOE/NNSA, and the NIS institutes should endeavor to identify and protect background intellectual property to the extent that commercialization of the intellectual property created under the IPP Program will be enhanced. Funds may be made available by the IPP Program to help pay for U.S. and foreign filing.

C. Publications

1) DOE/NNSA owns all technical data and computer software generated by the Laboratories at government expense. Although the Laboratories and DOE/NNSA may publicly disseminate this information, in some cases publication is not required or in the best interests of the Laboratories or DOE/NNSA. For example, information relating to inventions can be withheld from the public for a reasonable time to protect patent rights.

   To preserve the patent rights in Laboratory and NIS institute inventions, Laboratory employees should not disclose, in either written or verbal form, information concerning inventions made under the IPP Program to any third party without approval of Laboratory Patent Counsel. Public disclosure of inventions can jeopardize the ability to obtain patent rights. See Section III.A on nondisclosure agreements for more information protecting patent rights.

2) Unless specifically requested by DOE/NNSA or required under their M&O contract, Laboratory employees are not required to disclose any information generated at the Laboratories to third parties. Although the information may be available to these parties

under the Freedom of Information Act (FOIA), only federal government agencies are required to respond to requests made under FOIA.

FOIA permits an individual to make a formal written request for information to the federal government. DOE/NNSA personnel at Headquarters and/or the Field Operations Office determine how to respond to a request and may require delivery of information from a Laboratory. Laboratories may be subject to comparable state freedom of information laws, and designated Laboratory personnel handle these requests.

D. IPP Program Database

1) The database contains technical information describing the scope of the project, financial information, and the current status of the project. No proprietary information of NIS institutes or the USIC members should be included.

2) The Laboratories must ensure that the database is updated with current project information.

3) Detailed technical information describing a new technology or invention of the Laboratory or the NIS institute should not be put in the database unless protection of intellectual property rights has been assured. Fields will be established in the database to provide non-compromising information on the status and licensing of intellectual property for the IPP Program.

VII. Safeguarding Information

Improper handling of proprietary information (e.g., trade secrets) and potentially patentable information can lead to loss of intellectual property rights, costly litigation, and even criminal penalties. All IPP Program participants should strive to maintain the integrity of background intellectual property, Protected CRADA Information, and other commercially valuable information generated under the IPP Program.

A. Handling Information

1) Proprietary information may be exchanged under a nondisclosure agreement. Recipients of this information should protect the information in accordance with the agreement. (See Section III.A on nondisclosure agreements.) Recipients of proprietary information typically should:

- secure the information from unauthorized access;
- inform anyone receiving the information that the information must be protected (and recipients may be asked to sign an acknowledgment to that effect);
- control distribution of the information to those with a "need to know" and record the names of the recipients;

- identify and mark copies of the information appropriately; and
- date stamp and initial the information.
- If proprietary information is verbally disclosed or presented unmarked, the provider must confirm in writing its proprietary nature (usually within thirty days).
- Under IPP-Institute Contracts, the proprietary information of the NIS institute may be marked as "Limited Rights Data" or "Restricted Computer Software".
- When in doubt about the proprietary nature of the information, the recipient should ask for clarification from the provider.
- The information should be transmitted or copied under secure conditions. Telephones, electronic mail, and faxes may not be secure. The provider may establish the precedent for using electronic transmission.

2) Potentially patentable information should be:

- reported as required by the pertinent agreement;
- published or verbally presented only with the knowledge and consent of Laboratory Patent Counsel.

B. Storing Information

1) Proprietary information should be stored in locked offices or containers when unattended.
2) When a party is working under more than one agreement, information from the different projects must be segregated.

3) When proprietary information is no longer needed, the information should either be returned (with any copies) to the provider or destroyed, as provided in the agreement or requested by the provider.

4) Proprietary information should not be stored on a computer unless protected by a computer system.

VIII. Licenses

1) Laboratories should diligently attempt to negotiate royalty-bearing license agreements for NIS institute and Laboratory intellectual property arising under IPP-Institute Contracts and CRADAs.

2) USIC members may negotiate for greater rights than the non-exclusive license provided in the CRADA (e.g., exclusivity, domestic and foreign rights, outfield licenses, and sublicensing rights) to NIS and Laboratory intellectual property arising under an IPP-Institute Contract. These licenses will be royalty-bearing and will include a U.S. Competitiveness clause requiring substantial U.S. manufacture as required by the CRADA:

   "Any Licensed Products or Licensed Methods made used, or sold under this Agreement will be manufactured substantially in the United States."

3) At least one NIS institute (VNIIEF) has requested that each license negotiated by a Laboratory for NIS institute or Laboratory intellectual property arising under an IPP Program agreement reflect the royalty-sharing arrangement with the NIS institute. The definitions of net income in the license and IPP-Institute Contract should be consistent. Sample license language:

   "Licensor will share with [the inventing NIS institute] fifty percent (50%) of the net income received from the licensing of [Licensor CRADA Intellectual Property or NIS Institute Intellectual Property]."

4) Before paying out royalties to an NIS institute, the Laboratory should determine the preferred method of payment (check, deposit account) from the NIS institute.

5) The NIS institute is soley responsible for payment of royalties to NIS inventors.

6) Agreements to license Russian inventions must be registered with ROSPATENT. The Russian institute is responsible for this registration (including all costs) and for obtaining any necessary information from the Laboratory. The Laboratories will cooperate with the Russian institutes to provide the required information to ROSPATENT.

IX. Sample Documents

These documents are presented for illustrative purposes only. The forms should be modified to suit the needs of the IPP Program participants.

Exhibit A. Nondisclosure Agreement (2 pages)

Exhibit B. DOE Intellectual Property Certification Form – Close-out (1 page)

Exhibit C. Record of Invention Form (3 pages)

Exhibit A

MUTUAL NONDISCLOSURE AGREEMENT FOR EXCHANGE OF INFORMATION

This Agreement is effective this <date> day of <month>, 200_, by and between <Name> ("") located at <Address> and <Contractor Name> ("\"), located at <Contractor Address>, under its Contract No. Wxxxx-ENG-xx with the U. S. Department of Energy ("DOE"), as operators of <Laboratory>, located at <Laboratory Address> ("").

Whereas, <Contractor>, as operators of <Laboratory>, and <Name> (hereinafter individually referred to as the "Party", or collectively as the "Parties") wish to exchange certain confidential or proprietary information relating to

<technology description> ("Proprietary Information"). This Agreement will govern the conditions of mutual disclosure of Proprietary Information by the Parties.

The Parties agree:

(1) To perform all terms of this Agreement and to maintain the Proprietary Information in confidence, giving it the same degree of care, but no less than a reasonable degree of care, as the Parties exercise with their own proprietary information to prevent its unauthorized disclosure;

(2) To exchange and use the Proprietary Information solely for the purpose of <purpose description>;

(3) That neither Party, without the prior written consent of the other, will disclose any portion of the Proprietary Information to others except to their employees, agents, consultants, subcontractors, or Government personnel having a need to know in order to accomplish the sole purpose stated above, and who are bound by a like obligation of confidentiality under this Agreement;

(4) That neither Party nor DOE will have any obligation or assume any liability with respect to any portion of the Proprietary Information that:

(a) the receiving Party can demonstrate by written record was previously known to it;

(b) that is, or becomes, available to the public through no fault of the Parties;

(c) that is lawfully obtained by the receiving Party from a third party and is not subject to an obligation of
confidentiality owed to the third party; or

(d) that is independently developed by or for the receiving Party independent of any disclosure hereunder.

(5) That Proprietary Information disclosed by the Parties will be in writing and clearly marked "Proprietary Information." If such Proprietary Information is initially disclosed orally, it will be identified as Proprietary Information at the time of disclosure and the disclosing Party will, within thirty (30) days thereafter, confirm in writing the oral disclosure, referencing the date and type of Proprietary Information disclosed.

(6) That all rights and title to the Proprietary Information disclosed pursuant to this Agreement will remain the property of the disclosing party unless otherwise agreed to in writing by the Parties.

Technical Contacts:

<NAME>	<LABORATORY NAME>
<Contact Name>	<Laboratory Contact Name>
<Contact Address>	<Laboratory Contact Address>
<Contact Phone>	<Laboratory Contact Phone>
<Contact FAX>	<Laboratory Contact FAX>

The Parties further agree that the furnishing of Proprietary Information will not constitute any grant or license to the other for any legal rights now or hereinafter held by either Party.

This Agreement will be subject to, and interpreted in accordance with, the laws of the State of <state>.

This Agreement will remain in effect for two (2) years from the effective date first written above, at which time the receiving Party will return or destroy the Proprietary Information. If the Proprietary Information is destroyed, a

certificate of destruction will be furnished to the disclosing Party. The secrecy and non-use obligations set forth above will remain in effect for five (5) years from the effective date.

Any modification to this Agreement will be in writing and signed by the duly authorized representative of each Party.

<Name> <Contractor Name>

By: _____
(signature)
(signature)

Name: _____
(please print)
(please print)

Title: _____

Date: _____

Return to: <Laboratory Contract Administrator>

_____

_____

cc: [Principal Investigator Name]

Exhibit B

DOE INTELLECTUAL PROPERTY CERTIFICATION

Contract No. « #» under Doe Contract No. W-xxxx-ENG-xx for Operation of <Laboratory Name>
All items must be completed.

Name of Contractor:

_____

Address:

1. List all technical reports prepared during the course of the work under this contract and the Laboratory or DOE office to which the reports were sent. If none, please write "NONE" below. Please attach a copy of each report. Unless one has been submitted previously.

2. List any technical data delivered under this contract other than reports (e.g., computer software). If none, please write "NONE" below.

3. List below all inventions or discoveries made (conceived or first actually reduced to practice) under this contract. If none , please write "NONE" below. Please attach a record of invention form for each invention, unless one has been submitted previously. If one was submitted, please state to which office the form was sent and the date sent.

Identification No.	Title of Invention	Inventors/Authors	Patent Ap

4. List any subcontracts to this contract involving research and development. If none were granted, please write "NONE" below. If subcontracts were granted, please attach copies.

5. The following period is covered by this intellectual property certification:

From: <<Beginning Date>> **To:** <<End Date>>

month day year

month day year

6. I hereby certify that the above information is true and accurate to the best of my knowledge and belief:

Signature:

Date:

Telephone No.:

Print Name:

Title:

Please submit directly to: <Laboratory Contact>
<Laboratory Address>

Exhibit C

<LABORATORY> <Address>	File No.

Record of Invention

This invention was made in the course of or under <Contract No> between < > and < >.

I. Title of Invention:	Payroll Account No. and Department/Division:

II. Inventor(s): (First, Middle, Last) Title/Position
Employer Phone No. Fax No.

III. Abstract

IV. List actual past and current uses of your inventions, including, dates and locations:

List Government uses or possibilities for use:

List commercial uses or possibilities for use:

V. Documents, publications and presentations, describing the invention, that you have published or prepared for publication, or presented on the subject. Also, include presentations and publications Planned within one (1) year from now:

Date Title/Subject Publication No.

VI. Related Documents, (Including patents, other publications): Please include: Patent Nos., Authors, Title, Publication date, etc.

VII. DESCRIPTION:
(Background of the invention, including technical problems addressed by it:

Summary of the Invention (you may attach a paper). Please include a sketch of the invention, if possible:

VIII: Inventor's Permanent Home Address(es):

Name	Citizenship	Street Address, City, State, Zip Code

Please attach a separate sheet for additional inventors.

IX. Funding Source or Project Under Which the Invention Arose: Please include special project information.
Resource Manager: _____ Phone No.: _____
Account No.: _____ Subcontract No.: _____ CRADA No.: _____

Is funding presently being provided for development of your invention:
Yes: _____ No: _____
Please state the source of funds: (if same as above, please so state)

Do you reasonably expect future funding from the current source or other sources: Yes: _____ No: _____
If yes, what is that source _____

X. Conception (Date, Place): _____ at _____

Conception Date Conception Place

Earliest documentation of your invention: (please provide date and identify the document)
First Sketch or Drawing:
First Written Description:
Names of witnesses or others with knowledge of facts relating to conception:

Full Name	Organization	Phone Number

XI. Reduction to Practice:
Date first model completed: _____
Date of operation and testing: _____
Place of test: _____
Results of testing: _____
Witnesses or others with direct knowledge of test:

Full Name	Organization	Telephone Number

Appendix C

Attachment to Flash 2000-28

MEMORANDUM FOR: DISTRIBUTION

FROM: T. J. GLAUTHIER

SUBJECT: REQUESTS FOR THE INVOLVEMENT OF THIRD PARTIES IN DOE PROGRAMS IN RUSSIA AND OTHER STATES IN THE FORMER SOVIET UNION

The Department of Energy has in place several programs that use either prime contracts or subcontracts under management and operating contracts to provide monies to Russian scientific institutes and installations for the employment of Russian scientists in pursuit of peaceful and commercially viable technologies, the maintenance of nuclear power plants, and the maintenance and upgrading of security around nuclear material storage sites. By statutory mandate and in pursuit of most efficiently accomplishing the very important purposes of these programs, the Department and its management and operating contractors have established mechanisms for the administration of payments under these contracts and subcontracts that avoid the imposition of taxes by the governments involved and help ensure the DOE monies are properly utilized. These mechanisms consist of the use of three tax exempt third parties: the International Science and Technology Center (ISTC), the Science and Technology Center Ukraine (STCU), and the Civilian Research and Development Foundation (CRDF).

Certain of the Russian institutes and installations, under whose auspices the work has been and is being performed and which are the direct beneficiaries of these programs, have urged some of the Department's programs to contract or cause subcontracts to be awarded to other third parities. These other third parties offer no apparent substantive benefit to the accomplishment of DOE's programmatic objectives in those countries and pose risks to the proper and efficient use of DOE's monies. The risks are sufficiently large in the stewardship of public funds and the carrying out of these programs that I am issuing this memorandum with regard to the involvement of third parties other than the ISTC, the STCU, or the CRDF.

Simply put, I see no reason why any DOE program would not take advantage of the administrative capabilities and tax exempt status of the ISTC, the STCU, or the CRDF and want that option to be seriously considered. In any event, the Department will not, and our contracting officers will direct our management and operating contractors that they not, negotiate contract instruments with third parties unless (1) the third party is either the ISTC, the STCU, or the CRDF, or (2) a request for permission to negotiate contract instruments with other third parties is approved by the DOE Procurement Executive or the NNSA Procurement Executive, as appropriate. The request must be concurred in by the cognizant DOE contracting officer and DOE counsel. Such requests for permission must present the facts that purport to make involvement of the proposed third party necessary and assure that controls are in place to cause the monies involved to be efficiently and effectively put in the hands of the institutes and installations where the work will be performed and scientists who will perform the work. Any such request should also include a discussion of the resulting treatment of taxes by Russia or other state of the Former Soviet Union.

A copy of the December 22, 1999 memorandum on the use of the CRDF payment mechanism is attached for your information. Should you have any questions concerning the matter discussed above, please contact Janet Barsy for legal matters at (202) 586-8900, and your PSO for matters pertaining to your particular programmatic activity.

It has been determined that a field management council review of this notice is not required.

Thank You

Attachments: 12/22/99 memorandum on IPP payments

cc: Under Secretary Moniz
NNSA Administrator Gordon
Assistant Secretary for Energy Efficiency
And Renewable Energy
Assistant Secretary for Environmental
Management
Assistant Secretary for Environment
Safety and Health
Assistant Secretary for International Affairs
Acting Assistant Secretary for Fossil Energy
Deputy Administrator for Defense Programs
Acting Deputy Administrator for Defense Nuclear Nonproliferation
Director, Office of Civilian Radioactive
Waste Management
Director, Office of Nuclear Energy, Science and Technology
Director, Office of Science
Director, Office of Policy
Director, Office of Management and Administration
General Counsel
Chief Financial Officer
Director, Office of Management and Administration

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Oakland Field Office

Appendix D

IPP GUIDANCE FOR EVALUATING WEAPONS SCIENTISTS, ENGINEERS, AND TECHNICIANS

IPP requires that all NIS staff working on IPP projects be sorted into one of three categories, and that this information be contained in a table, by NIS institute, and attached to the project summary in Lotus Notes. The categories are:

1. Direct experience in weapons of mass destruction design, production or testing;
2. Experience in research and development of weapons of mass destruction underlying technology;
3. No weapons of mass destruction-relevant experience.

IPP requires that a preponderance of staff working on its projects have had weapons of mass destruction (WMD)-relevant experience before 1991 (i.e., fall in categories 1 or 2 above). The meaning of "preponderance" is taken to be 60 percent, as a bare minimum. Two-thirds would be better, and anything above that better still. **(Ed note for HQ:** this needs to be changed to read "50%", once the current GAO business is over. The dictionary definition of "preponderance" would include 50% and above; but GAO is right, we should have changed this at the point when the practice was modified in the past. - JN)

Essentially all of the senior level staff (head of laboratory and above, senior researcher) of an age to have been professionally employed during Soviet times should have had weapons of mass destruction-relevant experience. More junior level (and/or younger) staff may or may not have that experience. It is recognized that certain key individuals in a project may not have WMD-relevant experience, but are necessary to the project because of their skills or knowledge. This is allowable.

It is also recognized that individuals may have left their former WMD-related institutes or plants and joined spin-off companies or gone to other institutes. This is also allowable; the important thing is the WMD-relevant experience in Soviet times.

Professional experience should involve the technical areas within the following four groups:

I. Biological Weapons (BW) Experts

Delivery systems and equipment for the BW including submunitions.

Specific knowledge of the effects of biological weapons on humans or animals.

Design, construction and testing of BW.

Materials, facilities and. processes for the production of biological weapons.

Employment on biological projects which required a security clearance.

R&D on biological and toxin weapons and countermeasures.

II. Chemical Weapons (CW) Experts.

Delivery systems and equipment for CW.

Specific knowledge of the physiological and other effects of chemical weapons on humans or animals.

Design, construction and testing of CW.

R&D on CW and countermeasures.

Employment on chemical projects which required a security clearance.

III. Nuclear Weapons (NW) Experts

Design, development, testing, construction and testing of nuclear devices or weapons.

Design, development, formulation; testing and manufacture of explosives and or detonators for NW applications.

Design, development construction and performance of equipment for the separation or enrichment of fissile material for NW.

Design, construction and performance of warheads for the delivery of NW

Design, development, test, and safety of nuclear reactors with potential for nuclear weapons applications, to include highly enriched uranium, plutonium, or tritium.

Specific knowledge of physics, chemistry or other sciences which can directly lead to development of nuclear weapons.

Specific knowledge of the effects of nuclear -weapons on humans and/or equipment and facilities.

Design, test and fabrication of nuclear reactors or generators for submarines or other military applications.

IV. Missile Technology Experts

Design, development, fabrication and testing of missile systems including materials, fuels, and. electronics.

Design, development, fabrication and testing of systems for missile guidance, control and tracking.

Design, development, fabrication and test of systems used to transport, handle, and launch missiles.

Appendix E

STANDARD OPERATING PROCEDURES FOR OFFICIAL TRAVEL TO THE RUSSIAN FEDERATION

Effective Date: December 2001

Revision: 1

INTRODUCTION

In coordination with the U.S. Embassy to the Russian Federation, the Office of Defense Nuclear Nonproliferation (NA-20) has prepared Standard Operating Procedures to the Russian Federation, Revision 1. This volume supercedes the "Standard Operating Procedures to the Russian Federation" of August 2001.

The purpose of this guide is to assist you in understanding the new requirements for travel to Russia. Although this document also includes guidance on efficient and effective country clearance cable processing, and letter of invitation request procedures; the majority of this document addresses two key concepts: 1) Notification to the Embassy for trips requiring access to sensitive sites and 2) Country Clearance. These are two separate and distinct concepts.

Notification to the Embassy for trips requiring access to sensitive sites is a new requirement and addresses the Ambassador's concern that Embassy Officers (including DOE-M) have the opportunity to participate in any trip. Although many HQ offices already notify DOE-M in advance of trips to sensitive sites, some HQ program offices and national laboratories do not. Given the special administrative and logistical considerations surrounding trips to sensitive sites, these procedures and timelines have been drafted to ensure that Embassy Officers can be added to access requests prior to submission of these requests to the relevant Russian ministries or institutes.

Previously, in the absence of any clear-cut procedures requiring notification, the Embassy has often been unaware of trips to sensitive sites until the country clearance request cable reached post. Since the requests for access to these facilities had to be submitted at least 30-45 days prior to the beginning of the trip, receiving a country clearance request five or ten working days before the start of a trip did not allow Embassy Officers to join trips to sensitive sites.

The Ambassador has the right to have Embassy Officers accompany any delegation that visits Russia. As described in the Department of State Mission Statement, "the Ambassador reports to the President through the Secretary of State, and as Chief of Mission, has authority over all U.S. executive branch personnel, except for those under a U.S. area military commander." This grants the Ambassador the authority necessary to ensure that all U.S. Government (USG) activities conform to official USG policy. All DOE personnel and DOE-funded personnel are subject to this authority while in Russia on official business.

The country clearance process is the Ambassador's means of ensuring that all USG and USG-funded personnel working or traveling within the host country conform to official USG policy. It is important to understand that country clearance is required for all official travelers to Russia conducting U.S. Government business.

Basic requirements for country clearance cables remain unchanged. Country clearance request cables must be received at the embassy a minimum of five (5) working days before travel begins for travel that is within the Moscow consular district and when no Embassy assistance is requested. For travel outside the Moscow consular region or for travel that requires embassy assistance, the country clearance cable must be received at the embassy a minimum of ten (10) working days before travel begins and the cable requesting country clearance must be sent both to the Embassy in Moscow and the appropriate Consulate office.

It should be noted that it is the program's responsibility to ensure these time requirements are met. DOE-M and the Office of International Operations (IO) within Defense Nuclear Nonproliferation have agreed to strictly enforce these requirements.

The requirements listed herein reflect a combination of NA-20, Department of State, U.S. Embassy Moscow and Russian Government agency requirements for the processing of the paperwork described. If there are any questions regarding information contained herein, please do not hesitate to contact DOE/NNSA/NA-20 at (202) 586-0378/0653 or send email to nnforeigntravel@hq.doe.gov.

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DEFINITION OF TERMS USED IN THIS DOCUMENT

Access: The process of obtaining permission for USG personnel (federal, contractor or sub-contractor) to visit Russian sites, facilities, closed cities or military installations. (See sensitive site)

Cable: An official government message transmitted by the State Department Message Center, U.S. Missions overseas, and selected USG agencies. Cables are tracked by Message origination and the time-date group of the outgoing message.

Chief of Mission Authority: At posts overseas, the Ambassador reports to the President through the Secretary of State, and as Chief of Mission, has authority over all U.S. executive branch personnel, except for those under a U.S. area military commander. The Country Team, led by the Chief of Mission, is the principal coordinating body for all U.S. Government agencies represented at overseas Missions. As the lead agency abroad, State manages U.S. Embassies, Consulates, and other diplomatic posts, and supports the international activities of the rest of the U.S. Government.

Country Clearance: Embassy authorization for USG personnel's (federal, contractor or sub-contractor) travel to Russia on official USG business. The country clearance is valid for the express time period, purpose, and personnel listed in cable and must be received for every trip.

DOE-M: Moscow Office of the Department of Energy.

Embassy: The U.S. Embassy to the Russian Federation.

Embassy officer: DOS Foreign Service Officers and/or DOE/NNSA federal employees assigned to the Embassy.

EST: The Office of Environment, Science, and Technology of the U.S. Embassy - Moscow.

Lab: Any of the U.S. National Laboratories.

Letter of Invitation (LOI): A letter from a Russian entity inviting USG personnel (federal, contractor or sub-contractor) to travel to Russia.

Letter of Invitation Request: A Letter requesting an invitation to travel to Russia. Note: LOI requests are often combined with requests for access to sensitive sites.

Notification: Email sent to DOE-M informing it of any planned trips, which require access.

Office of International Operations (IO): Responsible for international offices and foreign travel policy process in the Office of Defense Nuclear Nonproliferation.

Post: The U.S. Embassy to the Russian Federation.

Requestor: Person sending the notification email.

Sensitive Site: A Russian sites, facility, closed city, or military installation that requires special permission be granted to USG personnel before they are allowed to visit said site.

Tracking number: The visit number issued to the delegation point of contact in the HQ program office for visiting delegation by DOE-M upon receipt of a notification message for trips that require access. This number **must** be included in the country clearance cable.

USG: United States Government.

Visa: Permission from a foreign government for a citizen of another country to visit or work in the host country. Visas can be either single entry or multi-entry. Important: having a visa does not constitute permission from the embassy for traveler to visit the host country; that permission is obtained through the country clearance process as described in this document.

SECTION I: TRIP NOTIFICATION

For the purposes of this document, there are two basic types of trips to the Russia Federation: 1) trips that do **not** require access to sites, facilities, or cities classified as sensitive or restricted by the Russian Government (hereafter, "sensitive sites") and, 2) trips that **do** require access to sensitive sites. This Standard Operating Procedure (SOP) primarily deals with the latter, however, the rules for submitting country clearance requests have also been included.

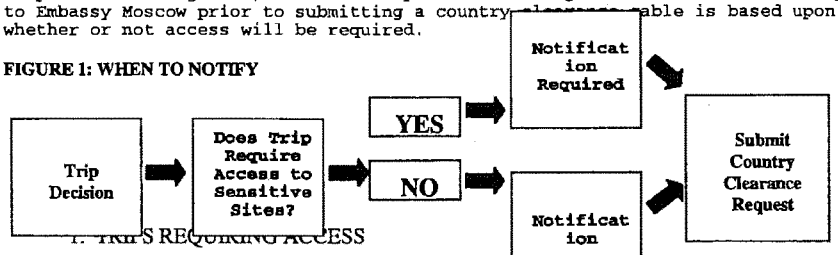
For trips requiring access to sensitive sites, personnel must notify the U.S. Embassy Moscow prior to submitting any trip-related correspondence with Russian ministries or facilities. This process is separate from the country clearance process, which occurs subsequent to "notification." The requirement to notify the embassy in advance applies to all personnel (federal, laboratories and contractors) planning to travel to Russia.

Notifying the embassy through DOE-M provides the Ambassador (or his delegates) the opportunity to decide to have embassy personnel participate in trips. As part of his Chief of Mission Authority, the Ambassador has the right to have his representatives participate in any USG trip or delegation occurring in the Russian Federation. In order to guarantee that embassy representatives are able to participate in trips to sensitive sites the notification process will be used. This process will work as follows:

A. NOTIFICATION PROCEDURES FOR SITE VISITS

As pictured in Figure 1, the necessity for submitting notification of the trip to Embassy Moscow prior to submitting a country clearance request is based upon whether or not access will be required.

FIGURE 1: WHEN TO NOTIFY



1. TRIPS REQUIRING ACCESS

For all trips requiring access, DOE-M must be notified at least **three full business days** before the access request letter is due to the relevant Russian agency, institute, facility, or site. For example, if the access request letter and delegation list is due to the Russian agency, institute, facility, or site 45 days before the trip begins, then notification to DOE-M would have to be received no less than 3 business days before the 45 day deadline. (It is solely the traveler's responsibility to correctly ascertain the current access requirements for each facility to be visited and submit -notification in accordance with those specific requirements.

Notification should be sent via email utilizing the following format through the HQ Program office to DOE-M:

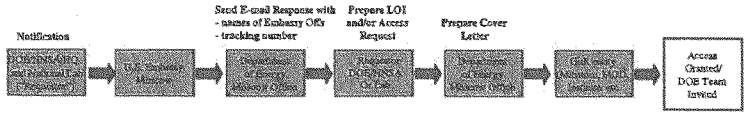
To: travel@doe.ru
CC: [nnforeigntravel@hq.doe.gov]
[Program contact at DOE-M, if relevant]
Subject: (program, delegation name, travel dates)

Destination: List all cities to be visited
Purpose: List the purpose of the travel, including names of institutes and government organizations to be visited. (This is similar to the

"Purpose" section on a country clearance request cable.)
Point of Contact: name, phone number

A sample notification is included at Appendix Two. *Note: Please avoid sending notification messages to the DOE-M Director and Deputy Director.*

FIGURE 2: THE NOTIFICATION PROCESS



Upon receipt of notification, DOE-M will log in the notification, assign a tracking number to the trip, and forward the information to the relevant embassy sections. A determination will then be made as to whether an embassy representative will accompany the delegation.

Post will provide the name and necessary information for the embassy representative who will be added to the attendees' list if applicable. The information will be emailed back to the requestor within 24-48 hours (1-2 business days) after receipt of the original notification **that an embassy person will be added to the list.** You must receive a "positive" response from DOE-M: silence does not constitute consent. Once approval has been granted DOE-M will draft a cover letter and send the letter of request to the appropriate Russian ministry, facility, etc. If necessary, the requestor can then correspond directly with the facility to be visited. If your designated POC does not receive a response from DOE-M within 24-48 hours, the POC should DOE-M at (9-011-7-095) 728-5202 immediately.

In order to keep the State Department informed and to eliminate any potential difficulties prior to the country clearance request cable, DOE-M will copy DOS/Policy and Regional Affairs (PRA) on this message, giving them advance notice of the trip.

The requestor should then proceed, developing the final letter of invitation/access request letter along with the list of delegation members. This should be sent to DOE-M via fax according to established procedures. (See Section Three) Upon receipt of the fax, DOE-M will attach a cover note and forward the request to the appropriate Russian entities.

Every delegation to Russia requiring access to a sensitive site MUST include the tracking number assigned by DOE-M during the notification process in the country clearance cable. This notification tracking number should be located on the reference line of the cable. (For more information see Section II on country clearance requirements.) DOE-M will keep a log of all notifications it receives and tracking numbers it assigns. *This number is essential for trips requiring access.*

2. TRIPS NOT REQUIRING ACCESS:

For trips not requiring access to a sensitive site, trip notification will be handled via the country clearance process (see Section II). These trips will not receive a tracking number.

SECTION II: COUNTRY CLEARANCE REQUIREMENTS

A. WHEN A COUNTRY CLEARANCE IS REQUIRED

1. Country clearance is required for all travelers (federal and contractors) conducting official U.S. Government business in Russia.

2. If an individual's travel is being paid for using U.S. Government funds, he/she must have a country clearance cable.

3. Work for Others. When any portion of a trip is being paid from appropriated funds, a country clearance cable is also required for laboratory or contractor employees.

B. COUNTRY CLEARANCE REQUIREMENTS IN GENERAL

1. The embassy requires that cables arrive at post a MINIMUM of five (5) working days prior to the beginning of travel if travel is
   - within the Moscow consular district AND
     - no embassy assistance is requested.

2. The embassy requires that cables arrive at post a MINIMUM of ten (10) working days prior to the beginning of travel if travel is:
   - outside the Moscow consular district AND/OR
     - embassy assistance is requested.

3. Requests submitted for processing after the time periods outlined above will not be processed by DOE-M except in extraordinary and unusual circumstances. No copies of the cable need to be faxed in advance.

4. Any changes to the original cable must be submitted to DOE-M through the International Operations Foreign Travel Section via email at: travel@doe.ru, cc: nnforeigntravel@hq.doe.gov. Trip coordinators and travelers are strongly encouraged to provide complete information in the country clearance request. Please avoid sending any travel-related emails to the Director and/or Deputy Director of DOE-M.

5. Travelers must submit an AMENDED cable under the following conditions:

- if the travel dates fall outside of the dates submitted in the original clearance request;
- if the scope/purpose of the trip changes from the purpose mentioned in the original clearance request;
- if an additional person is added to the original delegation.
- if a new site or region is added to the trip

Please note that travelers, whether they have single entry or multiple entry visas are required to request country clearance for *each* trip to Russia.

C. SPECIFIC REQUIREMENTS FOR COUNTRY CLEARANCE CABLES

This section describes the types of information required in a country clearance request cable. Requirements for how country clearance requests are to be written have not changed significantly since the "Department of Energy Country Clearance Cable and Letter of Invitation Guide For Entry Into Russia" of 17 April 2000. Sample country clearance request cables are included in Appendix 3.

1. Every cable should be addressed, tagged, and slugged properly in order to ensure that the cable will be sent to DOE-M. DOE/NNSA should be the primary addressee, every cable must include the tag "ENRG," and cables must be slugged, "PASS TO DOE MOSCOW: ABIENIAWSKI/NCARLSON."

2. The subject line for each country clearance request should list the originating agency, program office, program name, head of delegation and additional number of travelers, and dates requested.

Example: RUSSIA CTY CLR, DOE/NNSA/NNTRAV/MPCA: JONES + 2, 01/13/01 - 02/15/01

3. As mentioned in Section I: Travel Procedures Guidelines, a tracking number will be assigned during the notification process for travel requests that require access. All country clearance requests for such trips *must* include this tracking number. For any trips requiring access that have not gone through the notification process, country clearance **will be denied.**

4. Personal Information of Requesting Party/Parties.

- Name (s) of those requesting country clearance.
- Organizational affiliation of each individual requesting country clearance.
- Security clearance: Trips to Russia or the Embassy will normally not require the transmission of a personnel security clearance. The DOE-M office is located in the unclassified portion of the embassy. If the traveler requires access to classified matter, or access to Controlled Access Areas within the embassy, please coordinate with DOE-M and transmit your personnel security clearance information through your security office to the Office of Diplomatic Security's Central Certification Desk. Ensure that personnel security clearance reflect Top Secret or Secret and not "Q" or "L".

  The office responsible for the origination of the country clearance cable will ensure the following information is provided in those cables where passing personnel security clearances is necessary.
  (1) a statement that the personnel security clearance listed/noted for each traveler was "passed by the appropriate DOE personnel security office to the Office of Diplomatic Security, Central Certification Desk, on (date)"
  (2) the distribution portion of the country clearance cable MUST include the "DS/ICI/PSS Certification Unit" additionally
  (3) the cable should be tagged/slugged as "Pass to RSO."
- If unescorted access within the embassy is required, it MUST be spelled out within the cable.

5. Regarding Purpose of Travel and Facilities to be visited, please list:

a. Facilities to be visited.
b. Detailed description of the purpose of the visit. Making general statements such as, "to follow up on nonproliferation discussions at facility," cannot be accepted.

c. Justification for *each traveler* is no longer required. However, if the delegation consists of more than five (5) travelers, the requesting office should justify the larger size of the delegation, particularly when traveling to sites where the number of visitors may be limited. In the event that there is limited number of visitors allowed to a particular site, the Embassy and NA-20 HQ may need to discuss the final composition of the delegation.

6. Travel Itinerary.

a. Please provide as much information in the original cable regarding the proposed itinerary. If the exact itinerary is not known when the cable is drafted in advance, DOE-M will accept this information via email at a later date, but no later than 5 working days before the date of arrival.
b. Please send this information to the Office of International Operations Foreign Travel Section nnforeigntravel@hq.doe.gov.
c. When sending additional information to DOE-M after the original cable has been submitted, be sure to include your tracking number received from DOE-M in the notification response.
d. The itinerary must include the arrival and departure dates, cities to be visited and the name of the facility/facilities to be visited.
e. All NA-20 HQ/laboratory/contractor personnel must list all meetings with Minatom, GAN, MOD or other governmental agencies. If information is not known at the time of the country clearance request cable, please follow up with email or a phone call to the relevant HQ Program Office and DOE-M.

7. Points of Contact.

a. Clearance requests must include both a daytime and after hours point of contact and telephone numbers during the traveler's stay in Russia. These contact numbers will be used for emergency purposes only and are required to ensure the safety and well-being of the traveler.

8. Embassy/DOE-M Support Requests.

a. Clearance requests should list all Embassy/DOE-M support needed including but not limited to, booking meetings, hotel reservations, transportation arrangements, airline and rail tickets arrangement, embassy access, and interpreter requests for meetings. When logistical arrangements are requested, more detailed information, including arrival/departure flights and times, and details of any domestic travel must be included as well. (See Appendix One for additional information on requests for assistance.)
b. In cases where Embassy assistance is requested or projected, NA-20 fiscal data must be included in the original clearance request unless DOE-M has been provided with a general fiscal data account by the responsible program office. Fiscal data includes the following categories: (1) appropriation number, (2) agency/bureau code, (3) allotment code, (4) obligation number, and (5) function code.

9. **The failure to provide any of the aforementioned information may result in the Embassy deeming a clearance request incomplete.** As a result, the embassy will delay processing such a request until sufficient information for the clearance is submitted. DOE-M will notify the Office of International Operations Foreign Travel Section which will, in turn, notify the requesting office as soon as possible that insufficient information was received.

NOTE: When Cabinet-level officers, the Vice President or the President visit Russia, the Embassy usually declares a travel "black-out" for two weeks prior to the visit, and the week of the visit. During these periods, official travel is restricted and the Ambassador or the Deputy Chief of Mission must approve each country clearance request by special waiver to be granted through DOS. DOE-M will send a cable or an email informing headquarters about blackout periods and encourage DOE travelers to plan with such periods in mind.

SECTION III: LETTER OF INVITATION AND ACCESS REQUEST REQUIREMENTS

A. GENERAL GUIDELINES FOR LETTER OF INVITATION AND ACCESS REQUESTS

1. Requests for letters of invitation and access are forwarded to the relevant Russian Federation government agency for consideration. Please word your request for a letter of invitation (LOI) as a request, not as an order.

2. As described above in Section I, trip notification for technical and policy-related trips, including those with embassy participation, must be sent through the respective HQ program office to DOE-M for any facility where access to a sensitive site is requested. DOE-M will deliver the letter to the appropriate Russian agency with a cover note in Russian. Upon request, DOE-M can obtain a receipt for delivery of letters.

3. The trip notification for technical trips not requesting access to a sensitive site must be sent through the respective HQ program office to DOE-M for any facility to be visited. DOE-M will deliver the letter to the appropriate Russian agency with a cover note in Russian. Upon request, DOE-M can obtain a receipt for delivery of letters.

A. Single Entry Visas: Requests for single entry visas will take at least ten working days to process (or forty-five days if the trip itinerary includes a sensitive site) and should be sent to the appropriate Russian agency through DOE-M. Some Russian agencies require a legible photocopy of the traveler's passport (the page with the picture and the signature) and the following personal information:

Full Name
Title
Affiliation
Work Address
Office Phone/Fax
Date of Birth
Place of Birth
Passport #
Passport Expiration Date

B. Multiple Entry Visas: Requests for multiple entry visas require thirty days to process. Some Russian agencies require a passport photocopy and the following personal information:

Full Name
Sex
Title
Affiliation
Work Address
Office Phone/Fax
Date of Birth
Place of Birth
Passport
Passport Expiration Date
Home Address

B. DEADLINES FOR SUBMITTING REQUESTS FOR A LETTER OF INVITATION AND FOR ACCESS REQUESTS

1. For travel to Moscow and other non-sensitive sites, some Russian agencies require ten (10) working days to process the paperwork before the requesting party arrives in Russia. DOE-M must receive requests for LOI with sufficient time to deliver them to the appropriate Russian agency in compliance with the ten-day requirement.

2. For travel to any sensitive site, requests for LOI and access must be received by the appropriate Russian agency no later than forty-five (45) days before the requesting party intends to arrive in Russia.
   A. DOE-M must receive LOI and access requests in time to deliver the requests to the appropriate Russian agency in compliance with the forty-five day requirement.
   B. Special requirement for access requests to sensitive sites: If the requesting party plans to visit more than one Russian sensitive site without leaving Russia, the request for LOI must mention that the individual plans on visiting multiple sensitive sites before departing Russia.
   C. Be aware that certain requirements exist for other locations.

3. Please note that even where there is no special paperwork or time requirement for a city, certain individual facilities may still require advance notice. This notice period may be up to 45 days, depending on the facility.

C. REQUIRED ELEMENTS FOR THE LETTER OF INVITATION REQUEST

1. Please provide the name(s) of the facility/facilities and cities to be visited, and the proposed dates of visit.

2. Detailed explanation of the purpose of the visit, indicating under which NA-20 programs the visit will take place and which NA-20 headquarters program office and/or national laboratory has the lead.

3. Total number of people expected to be a part of the delegation upon arrival.
   A. Indicate the exact number of people travelling and list any alternates.
   B. Please list any interpreters by name separately and clearly indicate them as interpreters.

APPENDIX ONE: SUPPORT SERVICES OFFERED BY DOE-M

The primary purpose of DOE-M is to support the implementation of DOE programs, projects and initiatives in Russia. One method for providing this support is arranging logistical support for NA-20 travelers. In addition to private support service providers, DOE-M has access to embassy service providers - often at significantly reduced costs. DOE-M and embassy services follow:

1. In all cases where payment for service is required, DOE-M requires that fiscal data be included in the original country clearance cable requesting this support, unless DOE-M has already been provided with a general fiscal data account. In certain situations, such information may be accepted via email (travel@doe.ru) **no later than 5 working days** before the date of arrival if fiscal data is unknown at the time of cable submission. Program offices may consider sending general fiscal data to DOE-M, which will be used only when assistance is requested.

2. All requests (both known and projected) for Embassy/DOE-M support should be included in the original country clearance request. Additional information regarding such requests may be accepted via email at the following address: travel@doe.ru **no later than 5 working days** before the date of arrival. However, such late entries may delay the processing of assistance requests.

3. The following services may be requested from DOE-M:

   A. Hotel reservations.
   DOE-M will always try to book travelers at a requested hotel, but may change hotels if the Embassy rate is not available.

   Fiscal data information must be supplied in order to guarantee reservations. If no fiscal data is provided in the cable, hotel reservations will be reserved, but not guaranteed. This means that the reservation will be held until 6:00 PM (Russian Standard Time, EST plus 8 hours) and then automatically canceled if the traveler does not check in by that time. It becomes the traveler's responsibility to call the hotel and guarantee the reservation with the credit card if he/she will arrive after 6 PM local time.

   Other points to remember:
   - Names of travelers must be presented to hold a reservation.
   - Each traveler is responsible for his/her own bill upon checkout.
   - A first and second choice for hotel may be requested in the clearance request.

B. Airport Meet-and-Greet (Fiscal data is required in order to arrange these services.)

Executive Meet-and-Greet: $20 per person, provided by Intourtrans Company. Service includes expedited passage through customs, assistance with luggage, and coordination with a rent-a-car company. Intourtrans can also provide a car for hotel transfer for $50 if no other arrangements have been made, and will be paid by the Embassy through fiscal data provided by the program.

American Embassy Community Association (AECA) Meet-and-Greet. Pick up at airport and transportation to hotel. Cost is between $35 and $60 depending on the size of the vehicle. AECA also officers assistance in expediting passage through passport control and customs.

VIP Meet-and-Greet: expedited arrival / departure for the high level delegations, provided by the airport VIP lounge. The cost is $30 per person for arrival, $50 per person for departure.

C. Departure (Fiscal data is required in order to arrange these services.)

- Pick up at hotel and transportation to airport.
- Costs vary depending on the size of the vehicle.

C. Local transportation (Fiscal data is required in order to arrange these services.)
- Approximately $17 per sedan per hour; $19 per van per hour. More detailed pricing information available upon request.
- When transportation services are used for more than six hours, one full day will be invoiced.
- The official delegation representative must sign the driver's invoice acknowledging the number of hours worked.
- Fiscal data is required. However, if the delegation wants to make payment onsite, AECA will accept cash or personal checks.

E. Access to the Embassy Compound and Embassy Services. Travelers with a need for unescorted access to the Embassy compound, and for access to cleared sections of the Embassy must provide the traveler's security clearance in the clearance request. Please specify in the clearance request if unescorted access is required.

F. Domestic air tickets (Fiscal data is required in order to arrange these services.)

- Tickets for Aeroflot, Transaero, and other local airlines can be purchased at the Embassy.
- Fiscal data is required.

G. Domestic rail tickets (Fiscal data is required in order to arrange these services.)

- Train tickets can be purchased at the Embassy.

- Fiscal data is required.

H. Interpreters (Fiscal data is required in order to arrange these services.)

- Consecutive interpretation $25-$30 per hour
- Voice-over simultaneous interpretation $30-$35 per hour.
- Voice-over subject specific simultaneous interpretation $40 per hour.
- Minimum billing rate for interpretation services is 3 hours.
- The official delegation representative must sign the interpreter's invoice acknowledging the number of hours worked.
- Note: translator service cancellations must be made with 24 hours notice or 3 hours will be invoiced at $25 per hour.
- DOE-M also has an interpreter available for delegations. Please call the embassy to inquire.

I. Document translations (Fiscal data is required in order to arrange these services.)

- $15 per translated page (220 words of Russian text or 250 words of English text.
- If a document includes tables or graphics, a payment rate should be discussed individually).

J. Scheduled Meetings/Correspondence.

- DOE-M is available to request and arrange meetings with individuals from Russian organizations and facilities.
- In the case of meetings with senior Russian Ministry officials, these requests should be outlined in the clearance request to allow for sufficient lead-time for arrangements.
- The embassy may choose to attend any of the meetings taking place with Russian organizations or facilities.

IMPORTANT NOTE: All prices are subject to change; current prices may be obtained from DOE-M.

APPENDIX TWO: EXAMPLE OF EMAIL NOTIFICATION

Notification of travel to a sensitive site requiring access should be sent to DOE Moscow via email utilizing the following format. *Please avoid sending notification messages to the DOE-M Director and Deputy Director*

TO: travel@doe.ru
CC: nnforeigntravel@hq.doe.gov
Program contact at DOE-M if relevant
SUBJECT: INSP, Smith+5, January 15-21, 2000

Destination: *List all cities to be visited*
Purpose: List the purpose of the travel
Point of Contact: Name, phone number
This is provided as an example of an email notification in order to demonstrate the level of detail sought. Since it was based on actual language in a country clearance cable, names, facts and other information have been changed.

Deleted: 1

TO: travel@doe.ru
CC: nnforeigntravel@hq.doe.gov
Program contact at DOE-M if relevant
SUBJECT: INSP, Smith+5, January 15-21, 2000

DESTINATION: Moscow, Obninsk

PURPOSE: Attend "Fifth international information exchange forum on safety analysis for nuclear power plants of the VVRE and RBMK types (Forum 2000)" at the Institute of Physics and Power Engineering (IPPE). This forum brings plant, utility, regulatory, and research institute personnel together in an open forum to exchange information concerning past, present, and planned safety assessment work at soviet-designed reactors.

OR

PURPOSE: Team meetings and discussions concerning the Federation Nuclear Material Controls Accounting Information System with Vassilly Berchik, Situation and Crisis Center and the contracting agency. Team will have technical briefings at the Central Research Institute on Management Economy, and Information with Nikolay Yermakov, Ministry of Atomic Power of Russia (Atominform), the institute principally involved in the execution of the project. The last such meeting was held in St. Petersburg, July 19-23, 2000. Meetings are primarily for the purpose of status review, organization, contract discussions, and planning, but may also include technical discussions on any software problems/repairs.

REQUESTOR: Sally Smith
NN-80, Office of Nuclear Transmogrification
Phone number: (202) 586-9999
Fax number: (202) 586-1111

APPENDIX THREE: SAMPLE CABLES

Note: This is an action cable requesting embassy assistance, an example is provided for the level of detail required. Individuals coordinating the cable will vary as appropriate according to the individual program.

UNCLASSIFIED

USDOE/NNSA/NA-23:JMCCREADY
11/28/01:301-903-2576
EUR/PRA: DCAGAN

USDOE/NNSA/NA-23:JLESTER
USDOE/NNSA/NA-20:PDILL
EUR/PRA: JCONLON

PRIORITY MOSCOW

RHEBAAA/DEPARTMENT OF ENERGY WASHINGTON, DC

PASS TO DOE MOSCOW ABIENIAWSKI/NCARLSON

E.O. 12958: N/A

TAGS: ENRG, OTRA, TRGY, KSCA, KNNP, RS

SUBJECT: RUSSIA CTRY CLR DOE/NNSA/NNTRAV/INSP: BROWN + 2, 10/15-24/00

1. This is an action cable. See para 6.

2. The Department of Energy's (DOE) National Nuclear Security Administration's (NNSA) Office of Defense Nuclear Nonproliferation requests country clearance from October 15 through October 24, 2000 for the following NNSA-funded personnel travelling to Moscow and Obninsk in support activities related to the International Nuclear Safety program (INSP):

Walter Brown
Nuclear Engineer, DOE
PPN: 801557576
EXP: 25-Jan-04
DOB: 03-Oct-54
POB: Somewhere, Pennsylvania

Roberto Blanco, Jr.
Engineer, PNNL
PPN: 015666544
EXP: 25-Aug-08
DOB: 26-Jul-76
POB: Cleveland, Ohio

James Grey
Foreign Affairs Specialist, DOE
PPN: 015678139
EXP: 21-Mar-07
DOB: 17-Jan-38
POB: Gnome, Alaska

3. Purpose Of Travel:

In Obninsk (October 16-21): To attend Seventh Annual International Forum on safety upgrades to VVER and RBMK reactors at the Institute of Physics And Power Engineering (IPPE). This forum brings plant, utility, regulatory, and research institute personnel together in an open forum to exchange information concerning past, present, and planned transmogrification work. NA-20 provides funding for this event and traditionally sends personnel to attend.

In Moscow (October 22-23): Meet with the following Minatom officials to discuss future INSP cooperation: Mr. Nefedov, Deputy Director of the International Relations Department. Embassy officers are welcome to participate in these meetings.

4. Proposed Itinerary:

Team Itinerary
Oct 15: Arrive Moscow, Delta 30, 11:15 AM
Oct 16: Travel To Obninsk
Oct 16-20: Attend Safety Upgrade conference at IPPE.
Oct 21: Depart Obninsk for Moscow
Oct 22-23: Meetings at Minatom
Oct. 24: Depart Moscow for U.S., Delta 31, 1:15 PM.

5. Points of contact:

Obninsk:
Daytime POC: Boris Salo, IPPE, phone 7-084-367-8634;
After hours POC: Walter Brown, Hotel "Beda", 7-084-555-3215.

Moscow:
Day-time POC: Dmitry Yermakov, Minatom, 7-095-743-8888
After hours POC: Walter Brown, Marriott Tverskaya 7-095-935-8500

6. Embassy assistance is requested to:

Arrange the meetings with Mr. Nefedov, Deputy Director of the International Relations Department at Minatom on October 22-23

Make hotel reservations at the Marriott Tverskaya hotel for October 15-16, and for October 21-24

Arrange meet and greet service at Sheremetyevo II airport for arrival on Delta 30 at 11:15 AM on October 15, 2000 and transfer to the Marriott Tverskaya hotel

Arrange pick-up from The Marriott Tverskaya hotel and transfer to the Sheremetyevo II airport on October 24 for departure on Delta 31.

Arrange Embassy Access for Walter Brown and James Gray for October 21, 2000. Clearance information is provided above in paragraph 2.

Fiscal Data for hotels and transportation is provided below:

Agency/Bureau Code: 89
Appropriation ID: 89X1111.02
Allotment: CR-25-91
Obligation Number (CID): 00NN32251
Function Code (B&R): NN0125533
Fin Plan/Fund Type: OS/TF
Object Class: 25.2

7. DOE/NNSA appreciates embassy assistance. Travelers will notify of arrival and offer debrief to embassy officials prior to departure. Please slug response to S. Smith, NNA-23, fax 202-586-2121, phone 202-586-1111.

Note: this is an action cable requesting security clearance for unescorted entry into the embassy, an example is provided for the level of detail required. Individuals coordinating the cable will vary as appropriate according to the individual program.

UNCLASSIFIED

USDOE/NA-24:BDOE
08/01/01: 202-586-5876
EUR/PRA:DCAGAN

NP/PTR:CROWLEY
EUR/PRA:JCONLON
DS/ICI/PSS CERTIFICATION UNIT

USDOE/NA-20:PDILL
NNSA/NA-24:WDESMOND
NNSA/NA-24:JNOBLE

IMMEDIATE MOSCOW

RHEBAAA/DEPARTMENT OF ENERGY WASHINGTON, DC

PASS TO DOE MOSCOW: ABIENIAWSKI/NCARLSON; PASS TO RSO RENDEIRO

E.O. 12958: N/A

TAGS: ENRG, KNNP, MNUC, OTRA, PARM, RS

SUBJECT: RUSSIA CTRY CLR DOE/NNSA/NNTRAV/NA-40: SMITH+2, 8/24-9/4/2001

FOR POL-MIL, EST, CTR

1. This is an action cable. Please see paragraphs 2.

2. The National Nuclear Security Administration's Office of Defense Nuclear Nonproliferation requests country clearance for the following NNSA funded personnel traveling to Moscow and Sarov, Russia on August 24, 2001 through September 4, 2001. Personnel security clearances for John Smith and Tom Jones were passed to the Office of Diplomatic Security, Central Certification Desk at the DOS, on July 31, 2001 and requests DOS to pass clearance to Embassy Moscow for this trip only.

Name:	John Smith
Affiliation:	Nuclear Cities Initiative (NCI), NNSA
SS#:	241-20-2143
DOB:	30 September 1944
POB:	Falls River, Massachusetts

Passport No:	801687932
Expiration:	24 December 2004
Clearance:	Top Secret

Name:	Tom Jones
Affiliation:	NNSA Initiatives for Proliferation Prevention (IPP) Program, NNSA
SS#:	435-21-1984
DOB:	16 Aug 1949
POB:	Brooklyn, New York
Passport No:	80167543
Expiration:	31 MAY 2005
Clearance:	Top Secret

3. Purpose Of Travel:
In Moscow, travelers will participate in preparatory meetings and the signing ceremony for the joint NCI-IPP project establish kidney dialysis manufacturing capability that will engage former weapons personnel at Avangard complex in Sarov, Russia. After the signing, discussions will be held on the necessary upgrades needed on the buildings in Sarov to begin manufacturing.
In addition, Smith and Jones will meet with the International Science and Technology Center to discuss procedures for the implementation of ISTC administrative structure into the IPP program.

In Kaliningrad, Jones will hold meetings at the Fakel Experimental Design Bureau to discuss the development of new (IPP) projects.

Justification for Travel:
John Smith is the Director of the Nuclear Cities Initiative, which he will represent at the joint venture signing and will be leading the U.S. delegation.

Tom Jones is the Director of the Initiative for Proliferation Prevention, which he will represent at the joint venture signing (Aug 27-30). He will also consult with the ISTC on IPP partner project administration, and will visit the Fakel Institute to discuss a potential IPP project (Aug 31-Sep 1).

3. Proposed Itinerary
Smith:

August 24	Depart USA for Moscow
August 25	Arrive in Moscow USA
August 26	Departs For Kaliningrad
August 27-28	Meetings In Kaliningrad
August 29	Travel from Kaliningrad to Moscow Attend Meetings with Fresenius
August 30	Contract Signing for Fresenius
August 31-September 1	Meetings in Kaliningrad
August 31-September 2	Attend meetings with ISTC
September 3	Depart from Moscow

DOE:

August 27	Arrive in Moscow from Frankfurt (SEPTEL)

August 28-29	Attend meetings with Fresenius
August 30	Contract Signing for Fresenius
August 31	Depart Moscow for Frankfurt (SEPTEL)

Jones:

August 27	Arrive in Moscow from Frankfurt (SEPTEL)
August 28-29	Attend meetings with Fresenius
August 30	Contract Signing for Fresenius
August 31-September 2	Attend meetings with ISTC
September 3	Depart from Moscow

5. Points Of Contact:
Moscow:
Daytime: Director DOE Moscow, Tel: 7-095-728-5220.

Randall Beatty, ISTC, Tel:011-7-095-797-6030
Evening: Tom Jones, Moscow Marriott Grand, Tel: 7-095-935-8500.

Kaliningrad:
Daytime: Boris Gavaleshka, Fakel, Tel: 7-011-246-1964

Evening: Tom Jones, Hotel Comandor, Tel: 7-011-315-7442.

6. DOE/NNSA thanks embassy for assistance in acquiring security clearance requested for this trip. Embassy participation in these meetings is welcomed. Travelers will notify of arrival and offer debrief to Embassy officials prior to departure. Please slug reply to DMuslu, DOE-NA-40, tel. 202-586-5044, fax 202-586-5363, and KAasen, LLNL, tel. 925-423-2048, fax 925-422-7399. Thanks. YY.

Note: This is an amended cable, an example is provided for the level of detail required. Individuals coordinating the cable will vary as appropriate according to the individual program.

UNCLASSIFIED

USDOE/NA-23:CBURDETTE
5/30/01:301-903-5903
EUR/PRA:DCAGAN

EUR/PRA: JCONLON
NP/PTR: WSEVERE
DOE/NNSA/NA-20: PDILL
DOE/NNSA/NA-23: EMASTAL
DOE/NNSA/NA-241: SIEMON

PRIORITY MOSCOW, YEKATERINBURG PRIORITY

RHEBAAA/DEPARTMENT OF ENERGY WASHINGTON, DC

PASS TO DOE MOSCOW ABIENIAWSKI/NCARLSON

E.O. 12958: N/A

TAGS: ENGR, TRGY, KNNP, OTRA, RS

SUBJECT: AMENDMENT, RUSSIA, CTRY CLR FOR DOE/NNSA/NNTRAV/HEU, SMITH+1, JUNE 26-AUGUST 24, 2001

REFTEL: (A) MOSCOW 123456

1. Amendment. Per Reftel (A) The National Nuclear Security Administration's Office Of Defense Nuclear Nonproliferation requests amended cable to add a person (Tim Black) for detail to the Ural Electrochemical Integrated Enterprise (UEIE) in support of DOE's HEU Transparency Program from June 26-August 24, 2001. All other information remains the same.

Name: Joe Smith
Affiliation: Lawrence Livermore National Laboratory
DOB: 10-May-1958
POB: Salt Lake City, UT
Passport No.: 015698253
Expiration Date: 20-Oct-04

Name: Jane Doe
Affiliation: Lawrence Livermore National Laboratory
DOB: 23-Sep-1948
POB: San Francisco, CA

Passport No.: 015986372
Expiration Date: 9-Feb-03

Name: Tim Black
Affiliation: Lawrence Livermore National Laboratory
DOB: 13-Apr-45
Place of Birth: Oakland, CA
Passport No.: 015708261
Expiration Date: 15-Jan-02

2. Purpose of Travel: In accordance with U.S.-Russian HEU Transparency Agreement, the U.S. has established A Permanent Presence Office (PPO) at UEIE, Novouralsk, Russia, based on Annex 3 of the protocol. Monitors reside at the Green Cape Resort Hotel. Monitoring activities will be conducted Monday through Friday and will consist of daily visits to six monitoring points, review of nuclear material control & accountability forms, inspection of U.S. tags and seals, uranium sampling, LEU product shipments, and HEU containers shipped to UEIE. The PPO office is normally staffed with between 2 to 3 monitors.

3. Proposed Itinerary:

6/26: Arrive Yekaterinburg via Lufthansa 3388 6:55 p.m., Pragma to provide meet/greet/transportation and to the Magister Hotel, Tel: 7 3432 22 36 65, Yekaterinburg, RS.

6/27: Arrive Green Cape Resort Hotel, Novouralsk, RS; Pragma to provide transportation from Magister Hotel.

6/27-7/19: Conduct Monitoring Activities - UEIE

7/19: Depart Yekaterinburg via Urals 266 at 6:40 p.m.; Pragma to provide transportation from Green Cape Resort Hotel to airport

7/19: Arrive Moscow 7:10 p.m.; SAIC Western to provide meet/greet/transportation/reservations for two nights at Marriott Hotel, where Armantrout and Keyes will meet up with remainder of team for Fourth Special Monitoring Team visit to Siberian Chemical Enterprise (to be covered under separate cable), Tel: 7 502 935 8500.

7/20: Depart Moscow with team via Sibir Air 811 at 10:30 p.m.; SAIC Western to provide transportation to Vnukovo Airport.

7/21: Arrive Tomsk; SCHE to provide meet/greet/ transportation/lodging in Seversk area.

7/22-27: Conduct Fourth Special Monitoring Visit - SCHE

7/28: Depart Tomsk via Sibir Air 812 9:00 a.m.; SCHE to provide transportation from Seversk to Tomsk airport.

7/28: Arrive Moscow 9:15 a.m.; SAIC Western to provide meet/greet/transportation and reservations at Novotel Hotel, Tel: 7 502 220 6611.

7/29: Depart Moscow via Urals 261 at 10:10 a.m.; SAIC

Western to provide transportation from Novotel to airport.

7/29: Arrive Yekaterinburg 2:40 p.m.; Pragma to provide meet/greet/transportation to the Green Cape Resort Hotel.

7/30-8/24: Resume Monitoring Activities - UEIE

8/24: Depart Yekaterinburg via Lufthansa 3275 2:25 p.m. for U.S.; Pragma to provide transportation from Green Cape Resort Hotel to Yekaterinburg airport

4. Points of Contact: Day POC: Gennadiy Solovyov, tel: 34370 2 41 47; Night POC: Joe Smith, HOD, tel: 827044847 or Green Cape desk, tel: 827045521

5. DOE appreciates country clearance. No embassy assistance requested. Travelers will notify of arrival and offer debrief to embassy officials prior to departure. Embassy representatives are invited to participate in planned meetings. Please slug outgoing and response to C. Burdette, DOE/NA-23 (GTN). YY

Note: this is a cable with the notification tracking number, an example is provided for the level of detail required. Individuals coordinating the cable will vary as appropriate according to the individual program.

UNCLASSIFIED

USDOE/DOE HQ:GVERRY
05/16/2001:202-586-8456
EUR/PRA: DCAGAN

EUR/PRA:JCONLON USDOE/NA-25:PCAHALANE
NP/PTR: MCURRY USDOE/NA-20:PDILL

ROUTINE MOSCOW, YEKATERINBURG

RHEBAAA/DEPARTMENT OF ENERGY WASHINGTON, DC

PASS TO DOE MOSCOW: ABIENIAWSKI/NCARLSON

E.O. 12958: N/A

TAGS: ENRG, OTRA, KNNP, TRGY, PARM, RS

SUBJECT: RUSSIA CTRY CLR, DOE/NNSA/NNTRAV/MPCA: BLACK + 1, 06/21/2001 - 06/29/2001

Ref: (A) Notification #25

1. The National Nuclear Security Administration's (NNSA) Office of Defense Nuclear Nonproliferation (NN) requests country clearance from 06/21/2001 - 06/29/2001 for travel to VNIITF in the Yekaterinburg Region for the following NNSA personnel.

Name: Tim Black
Affiliation: Los Alamos National Laboratory
DOB: 12-Apr-1950
POB: Oakland, CA
Passport No.: 015896462
Expiration Date: 17-Jan-05

Name: Sue Young
Affiliation: Sandia National Laboratories
DOB: 3-FEb-1951
POB: Las Vegas, NV
Passport No.: 015487268
Expiration Date: 25-Jun-03

Purpose of Trip: Team will review past projects and tasks, update ongoing projects, and plan future Materials
Protection, Control and Accountability upgrades at VNIITF
The focus of this team will be a detailed review of
physical protection and technical security upgrades at the
facility in support of the Materials Protection, Control, and Accounting

program.

2. Points of contact:
Day:
Black, Sherdon Hotel, Rhein Main Airport, phone 4969-69770, Fax 4969-6977/2209

Alevtin Karpov, VNIITF, phone 7351-7232-109, Fax 7351-7230-979 or 7351-7232-109

Evening:
Black, Sherdon Hotel, Rhein Main Airport, phone 4969-69770, Fax4969-6977/2209

Black, Snezhinka Hotel, phone 7351-7232-416

3. Proposed itinerary:
06/21/2001 - Black, Young depart U.S.
06/22/2001 - arrive in Frankfurt;
06/22/2001 - departs for Yekaterinburg
06/23-29/2001 - meets with VNIITF representatives
06/29/2001 - departs for U.S.

4. No embassy assistance requested. Travelers will notify of arrival and offer debrief to embassy officials prior to departure. No embassy personnel will participate in meetings per Reftel (A). Please slug reply to Judy Reid, LLNL, Phone 925-422-2989; Fax 925-423-4051. George Verry, NNSA, Phone 202-586-8456; Fax 202-586-5187. Thanks. YY

Appendix F

U.S. Department of Energy ORDER DOE O 551.1A
Washington, D.C.

Approved: 8-25-00
Sunset Review: 8-25-02
Expiration: 8-25-04

SUBJECT: OFFICIAL FOREIGN TRAVEL

1. OBJECTIVES. To establish Department of Energy (DOE) and National Nuclear Security Administration (NNSA) requirements and responsibilities governing official foreign travel by Federal and contractor employees.

2. CANCELLATION. This Order cancels DOE O 551.1, dated 1-31-00, and all exemptions, waivers, and existing draft policy.

3. APPLICABILITY.

   a. DOE Elements. This Order applies to all DOE elements, including NNSA.

   b. Contractors. The Contractor Requirements Document (CRD), Attachment 1, sets forth intended requirements for contractors responsible for management and operation of Department-owned facilities and other contractors as determined by the contracting officer. Compliance with the CRD will be required to the extent set forth in a contract.

   c. Exclusions. This Order does not apply to grantees.

4. REQUIREMENTS.

   a. General.

      (1) Official foreign travel is to be used to advance DOE, including NNSA, program, objectives consistent with U.S. foreign and nonproliferation policy, international energy policy and agreements, and national security policy objectives.

      (2) Counterintelligence and intelligence interests, security interests, and sensitive subjects, a list of which is maintained by the Office of Defense Nuclear Nonproliferation, and technologies must be protected in a manner consistent with program requirements, including compliance with export control laws and regulations.

      (3) This Order establishes a Foreign Travel Board to oversee and review official DOE, including NNSA, foreign travel policies and to recommend updates to policy to ensure the Department's official foreign travel activities are consistent with its mission and objectives, as well as with prudent business practice. The Board consists of one representative from each of the following organizations:

      Office of the Chief Financial Officer (Chair),

Office of Counterintelligence,
Office of Defense Programs,
Office of Intelligence,
Office of International Affairs,
Office of Defense Nuclear Nonproliferation,
Office of Science,
Office of the Secretary,
Office of Security and Emergency Operations,
Office of Environmental Management,
Office of General Counsel, and
National Nuclear Security Administration.

The Deputy Secretary may add additional members at his discretion.

(4) Blanket official foreign travel orders may be issued for all Federal employeeswho might be required to respond immediately to an emergency.

b. Country Clearance Requests.

(1) Country clearance must be requested and granted before a Federal employee may begin official foreign travel.

(2) Requests for official foreign travel to a sensitive country or involving a sensitive subject must be made 30 days or more before the proposed departure date to receive appropriate and timely country clearance.

(3) Requests for official foreign travel to a non-sensitive country and not involving a sensitive subject must be made 21 days or more before the proposed departure date to receive appropriate and timely country clearance.

c. Foreign Travel Management System.

(1) All official foreign travel must be entered into the Foreign Travel Management System.

(2) Requests for official foreign travel must be entered into the Foreign Travel Management System at least 21 days before the proposed departure date, or at least 30 days before the proposed departure date if travel is to a sensitive country or involves a sensitive subject.

(3) All requests for official foreign travel that have been entered into the Foreign Travel Management System that are canceled or disapproved must be marked appropriately in the system within 30 days after the proposed departure date.

d. Security/Counterintelligence Briefings.

(1) All Federal employees traveling to a sensitive country, regardless of whether they hold a security clearance, shall be provided appropriate pre-briefings and debriefings by, and at the discretion of, counterintelligence officers. This requirement does not apply to Federal employees without clearances at the seven facilities listed below. This exception

was made because these facilities do not perform classified work and are exempt from certain provisions of DOE N 142.1, UNCLASSIFIED FOREIGN VISITS AND ASSIGNMENTS. (Note: This requirement does apply to Federal employees at these sites who possess clearances.)

(a) Ames Laboratory,
(b) Fermi National Accelerator Facility,
(c) Lawrence Berkeley National Laboratory,
(d) National Renewable Energy Laboratory,
(e) Princeton Plasma Physics Laboratory,
(f) Stanford Linear Accelerator Facility, and
(g) Thomas Jefferson National Accelerator Facility.

(2) All Federal employees who hold or have held personnel security clearances within the past 5 years, and are traveling to a sensitive country shall be provided appropriate pre-briefings and debriefings by, and at the discretion of, the element Headquarters Security Officer.

(3) All Federal employees, including those at the seven sites listed above, must receive an annual counterintelligence awareness briefing and an annual security awareness briefing, regardless of whether they hold clearances.

e. Security.

(1) All Federal employees hand carrying classified material overseas must comply with the requirements in DOE M 471.2-1B, CLASSIFIED MATTER PROTECTION AND CONTROL MANUAL, which includes possessing the appropriate access authorization and diplomatic passport.

(2) Each organization will have access to official foreign travel data under its cognizance in the Foreign Travel Management System. The Offices of the Secretary, Chief Financial Officer, and International Affairs will have access to all data within the Foreign Travel Management System except as provided in paragraph 4e(3).

(3) Access to travel information in the Foreign Travel Management System for the Secretary, Deputy Secretary, and both Under Secretaries, members of their staffs, and security personnel directly supporting them will be limited to the Offices of the Secretary, the Chief Financial Officer, and the Designated Agency Ethics Official. The Office of the Chief Financial Officer may distribute this information only with the authorization of the Deputy Chief of Staff to the Secretary.

Disclosure outside of DOE, including NNSA, of any information contained in the system, except for the purpose of obtaining country clearance, is prohibited unless approved by the Deputy Chief of Staff to the Secretary.

Nothing in this Order shall preclude access to travel information in the Foreign Travel Management System by Federal law enforcement agencies. Disclosures pursuant to the Freedom of Information Act and the Privacy Act shall be in accordance with applicable

Departmental regulations. The Deputy Chief of Staff shall be notified, when appropriate, prior to disclosures to Federal law enforcement agencies or pursuant to the Freedom of Information Act and Privacy Act.

f. Review Procedures.

(1) Each organization must have an approval process for official foreign travel. This process, which must include appropriate input from officials with responsibility for intelligence, counterintelligence, security, export control, and technology transfer concerns, will ensure compliance with the Export Control Guidelines established by the Office of Defense Nuclear Nonproliferation.

(2) The responsible Program Secretarial Officer or Deputy Administrator, NNSA funding the official foreign travel or, if there is no DOE funding, the official having programmatic responsibilities associated with the official foreign travel, has final approval for official foreign travel.

(3) The responsible Program Secretarial Officer or Deputy Administrator, NNSA may waive the time frame requirements of 21/30 days if appropriate justification is provided. The responsible Program Secretarial Officer or Deputy Administrator, NNSA may require a written justification before considering expediting the processing of travel requests. The responsible Program Secretarial Officer or Deputy Administrator, NNSA is under no obligation to approve the travel.

g. Trip Closeout.

(1) Post-travel trip reports for all official foreign travel are required from each traveler with the exception of advance and security personnel supporting travel by the Secretary, the Deputy Secretary, or an Under Secretary; post-travel trip reports must be submitted within 30 days after return to duty station (see Attachment 2).

(2) The traveler must provide information on the trip report regarding the actual cost of the travel.

(3) Further foreign travel may be denied until all outstanding trip reports are received from the traveler.

h. Travel by the Secretary of Energy.

(1) For the purposes of this Order, the Deputy Chief of Staff of the Department (DCOS) serves as the head of organization and, in that capacity, approves and authorizes Office of the Secretary travel.

(2) After authorizing a trip by the Secretary of Energy, the DCOS must approve a draft budget for the trip and forward it to the Office of the Chief Financial Officer. Only the DCOS or designee may authorize trip expenditures. No expenses in excess of the approved mission budget can be incurred without prior

approval from the DCOS or designee.

(a) No arrangements for transportation, lodging, or other travel related goods or services (either in the United States or in a foreign country), other than those associated with trip planning, coordination, and approval, may be completed before the budget is approved.

(b) Subsistence and related travel expenses for travelers (Federal employees or non-Federal invitees) must be authorized and regulated through standard Federal regulations and processes.

(3) The DCOS must approve all participation in Secretarial travel, including that of DOE employees, contractors, representatives from other agencies, and private-sector participants (see paragraph 4i). Only the minimum number of staff necessary to support the mission objectives will be authorized to travel.

(4) Country Clearance Request.

(a) A country clearance request, as needed to obtain the clearance described in paragraph 4b(1), must describe authorized expenditures and appropriate fiscal data.

(b) Only the DCOS or designee (usually members of the Office of Scheduling and Advance) may authorize any expenditure not described in this request.

(5) In addition to country clearance, advance agreement in writing to support the trip is required from the relevant U.S. Embassy for any trip for which the budget is over $150,000.

(6) The DCOS must notify the Office of Cabinet Affairs of proposed travel by Secretarial Officers.

i. Private-Sector Participation in Trips.

(1) Private-sector participants may accompany travelers when their participation is consistent with the goals of the travel.

(2) Mission-specific, objective criteria for selecting participants from the private sector must be approved by the head of organization before such participation is invited.

(3) At no time will DOE, including NNSA, incur an expense for the sole benefit of the business community or other private-sector personnel.

5. RESPONSIBILITIES.

a. DOE Foreign Travel Board. Conducts quarterly meetings to review DOE, including NNSA, foreign travel policy, aggregate system reports, DOE-sponsored conferences, responsible Program Secretarial Officer or Deputy Administrator, NNSA waivers of travel expedited earlier than the 21- or 30-day requirement contained in paragraphs 4b(2) and (3), and any other areas of Secretarial interest.

b. Deputy Chief of Staff. Implements the requirements set forth in paragraphs 4h and 5d (as appropriate) of this Order.

c. Office of the Chief Financial Officer.

(1) Develops and disseminates DOE, including NNSA, requirements and responsibilities for official foreign travel and maintains the Foreign Travel Management System.

(2) Prepares reports for the quarterly meetings of the DOE, including NNSA, Foreign Travel Board with guidance of the Office of the Secretary.

d. Heads of Organizations.

(1) Approve and oversee all official foreign travel under their purview, establish appropriate internal controls to ensure accountability, and assume accountability for all approval decisions within their organizations.

(2) Provide to the responsible Program Secretarial Officer or Deputy Administrator, NNSA justification for any trips that are approved outside the 21- or 30-day requirement contained in paragraphs 4b(2) and (3).

(3) Ensure all official foreign travel complies with the following:

(a) Travel is consistent with programmatic requirements for travel, security issues, effective use of resources, requirements governing conference management, adequacy of funding, and leave taken in conjunction with travel.

(b) Travel to countries on the Sensitive Countries List or involving subjects on the Sensitive Subjects List is conducted in compliance with U.S. national security, counterintelligence, and nonproliferation policies, including U.S. export control laws and regulations.

(c) All requests for official foreign travel to countries on the list of state sponsors of terrorism maintained by the Department of State are reviewed according to procedures established by the Office of Defense Nuclear Nonproliferation.

(4) May deny approval of an official foreign trip if travelers have not complied with trip closeout requirements for an earlier trip within specified time period.

(5) May deny reimbursement of official foreign travel expenses if all approvals, including country clearance where required, have not been finalized prior to travel.

(6) May waive 21/30-day time requirements for emergency response activities, as long as appropriate country clearances are obtained.

e. Responsible Program Secretarial Officer or Deputy Administrator, NNSA.

(1) Has final approval of official foreign travel funded by the office under his or her cognizance.

(2) Develops and issues instructions for implementing this Order within programmatic responsibilities and consistent with this Order.

(3) Issues blanket official foreign travel orders, as needed, for emergency response and other national security activities. Appropriate country clearances are still required before official foreign travel can begin.

(4) Prepares and provides required cable and notification to the U.S. Embassy in the country to be visited.

(5) Notifies the traveler when country clearance has been received.

(6) When the official foreign travel request is not received in time to meet the 21/30-day requirement contained in paragraphs 4b(2) and (3), considers expediting the travel request with appropriate justification.

(7) Establishes requirements for format, content, and distribution of trip reports consistent with the requirements in Attachment 2.

f. Federal Traveler.

(1) Ensures the request for approval of official foreign travel is entered into the Foreign Travel Management System. For travel not entered in time to meet the 21- or 30-day requirement, provides a justification as required by the responsible Program Secretarial Officer.

(2) Ensures the required information for obtaining a country clearance is provided to the responsible Program Secretarial Officer or Deputy Administrator, NNSA.

(3) Receives country clearance from the U.S. Embassy, through the responsible Program Secretarial Officer or Deputy Administrator, NNSA, in the country to be visited before travel begins.

(4) For all Federal employees on official foreign travel, for the purpose of pre-briefings and debriefing, 30 days prior to and upon return from travel.

(a) ensures that local counterintelligence officers and Headquarters, Office of Intelligence, are notified of the travel to a sensitive country;
(b) ensures that local counterintelligence officers are notified of travel to any country where foreign monetary support is provided for the travel; and
(c) ensures that local security officers are notified of travel to a sensitive country when the traveler holds or has held a personnel security clearance within the past 5 years.

(5) Obtains appropriate authorization from

(a) Headquarters, Director of Safeguards and Security, when hand carrying classified material overseas;
(b) Headquarters, Director of Intelligence, when hand carrying classified foreign intelligence material overseas.

(6) Complies with trip closeout requirements (see Attachment 2)
(7) Ensures the Foreign Travel Management System is updated for official foreign travel requests that were entered and subsequently canceled or disapproved.

g. Emergency Response Personnel. Provide briefings to appropriate offices as requested upon return.

h. The Office of Scheduling and Advance. Manages all Secretarial travel logistics.

6. REFERENCES.

a. Federal Travel Regulations, Chapter 301, "Temporary Duty (TDY) Travel Allowances."

b. Federal Travel Regulations, Chapter 304, "Payment from a Non-Federal Source for Travel Expenses."

c. Department of State Standardized Regulations, Section 925, related to per diem for foreign areas.

d. DOE O 110.3, CONFERENCE MANAGEMENT, dated 11-3-99.

e. Presidential Decision Directive 12, "Security Awareness and Reporting of Foreign Contacts."

f. DOE M 471.2-1B, CLASSIFIED MATTER PROTECTION AND CONTROL MANUAL, dated 1-6-99.

g. DOE 5670.3, COUNTERINTELLIGENCE PROGRAM, dated 9-4-92.

7. CONTACT. Questions concerning this Order should be directed to the Office of Chief Financial Officer, Capital Accounting Center, (202) 586-4048 or (301) 903-3077.

8. DEFINITIONS.

a. Blanket Travel Orders. Travel authorization that is valid for the Domestic Emergency Support Team (DEST) led by the Federal Bureau of Investigation, the Foreign Emergency Support Team (FEST) led by the Department of State, or emergency response activities that have been authorized or deployed by an emergency response officer.

b. Country Clearance. Notification from the U.S. Embassy of the country to be visited that a request to travel to that country has been approved.

c. Emergency Response. The national technical capability to respond to radiological and nuclear incidents and accidents within the United States and abroad. This capability typically supports the

Department of Energy, Department of Defense, Department of State, Federal Bureau of Investigation, and other Government agencies. Because organizations must be able to deploy their emergency response capabilities without notice (i.e., no-notice), DOE emergency teams may be required to deploy within 4 hours of notification.

d. Foreign Travel Management System. The official Departmental system for tracking, monitoring, and reporting on foreign travel by Federal and contractor employees.

e. Head of Organization. The head official of the organization that employs the traveler. For the purposes of this Order, the responsible Program Secretarial Officer or Deputy Administrator, NNSA may designate head of organization(s). In addition, the head of organization approving and authorizing the travel of the Office of the Secretary and Assistant Secretaries in Headquarters program offices will be the Deputy Chief of Staff for the Secretary.

f. Official Foreign Travel. Approved travel (whether wholly or partly on official business) from the United States (including Alaska, Hawaii, the Commonwealths of Puerto Rico and the Northern Mariana Islands, and the territories and possessions of the United States) to a foreign country and return, travel between foreign countries by persons, including foreign nationals, whose salaries or travel expenses or both will ultimately be funded in whole or in part by DOE or NNSA from its appropriations. Official foreign travel also includes travel funded by non-DOE or non-NNSA sources for which the traveler represents the Department or NNSA or conducts business on behalf of the U.S. Government.

g. Responsible Program Secretarial Officer. The senior DOE Headquarters official whose office will fund the requested travel, or if there is no DOE funding, the official having programmatic responsibilities associated with the requested travel. For Headquarters employees, this may be the same person as the head of organization.

h. Sensitive Country. A country to which particular consideration is given for policy reasons. Countries may appear on the sensitive country list for reasons of national security, nuclear nonproliferation, regional instability, threat to national economic security, or terrorism support. The Office of Defense Nuclear Nonproliferation maintains this list.

i. Sensitive Subjects. Unclassified subjects/topics identified in existing Federal regulations governing export control as well as those identified by the Department as unique to its work, which involve information, activities, and/or technologies that are relevant to national security. Disclosure of sensitive subjects has the potential for enhancing weapons of mass destruction capability, leading to weapons of mass destruction proliferation, divulging militarily critical technologies, or revealing other advanced technologies that may adversely affect U.S. national economic security. The Office of Defense Nuclear Nonproliferation maintains this list.

BY ORDER OF THE SECRETARY OF ENERGY:

T. J. GLAUTHIER
DEPUTY SECRETARY
CONTRACTOR REQUIREMENTS DOCUMENT
DOE O 551.1A, OFFICIAL FOREIGN TRAVEL

All contractor personnel employed by entities under contract or subcontract to the Department of Energy (DOE) or National Nuclear Security Administration (NNSA) must comply with the requirements of this Contractor Requirements Document, Government regulations concerning contractor travel, procedures established by the Office of the Chief Financial Officer, and guidance provided by the responsible Program Secretarial Officer or Deputy Administrator, NNSA.

Disclosure outside of DOE, including NNSA, of any information contained in the system, except for the purpose of obtaining country clearance, is prohibited unless approved by the Office of the Secretary.

1. REQUIREMENTS.

b. In preparing for or performing official foreign travel, contractors must comply with the following requirements.

(1) Review, approve, and oversee all official foreign travel under their purview and establish appropriate internal controls to ensure accountability within their organizations. Ensure that travel complies with regulations and DOE directives; that it is consistent with U.S. foreign and nonproliferation policy, international energy policy and agreements, and national security policy objectives; and that it considers DOE, including NNSA, missions and resources. Final approval for official foreign travel is with the responsible Program Secretarial Officer or Deputy Administrator, NNSA funding the travel or, if there is no DOE funding, the official having programmatic responsibilities associated with the requested travel.

(2) Ensure all official foreign travel complies with the following.

(a) Travel is consistent with programmatic requirements for travel, security issues, effective use of resources, requirements governing conference management, adequacy of funding, and leave taken in conjunction with travel.
(b) Travel to countries on the Sensitive Countries List or involving subjects on the Sensitive Subjects List is conducted in compliance with U.S. national security, intelligence, counterintelligence, and nonproliferation policies, including U.S. export control regulations.
(c) All requests for official foreign travel to countries on the list of state sponsors of terrorism, maintained by the Department of State, are reviewed according to procedures established by the Office of Defense Nuclear Nonproliferation.

(3) When appropriate, coordinate the approval of official foreign travel with officials responsible for intelligence, counterintelligence, security, export control, and technology concerns to ensure compliance with the Export Control Guidelines established by the Office of Defense Nuclear Nonproliferation.

(4) Comply with the following country clearance requirements.

(a) Country clearances are required when contractors are traveling to a sensitive country; country clearances are also required when contractors are traveling to a non-sensitive country and either are meeting with senior Government officials or require assistance of the U.S. Embassy, Mission, or Consulate.

(b) For the purpose of country clearance requests, contractors must provide sufficient information for the responsible Program Secretarial Officer or Deputy Administrator, NNSA to prepare and provide notification to the U.S. Embassy in the country to be visited.

(c) For travel requiring country clearance, contractors must receive country clearance from the U.S. Embassy in the country to be visited prior to the start of the travel.

(5) For all contractors on official foreign travel, ensure appropriate pre-briefings and debriefings are provided 30 days prior to the start of and upon return from travel by, and at the discretion of the following:

(a) Counterintelligence officers when travel is to a sensitive country, regardless of whether the traveler holds a security clearance. This requirement does not apply to contractors without clearances at the seven facilities listed below. This exception was made because these facilities do not perform classified work and are exempt from certain provisions of DOE N 142.1, UNCLASSIFIED FOREIGN VISITS AND ASSIGNMENTS. (Note: This requirement does apply to contractors at these sites who possess clearances.)

1 Ames Laboratory,
2 Fermi National Accelerator Facility,
3 Lawrence Berkeley National Laboratory,
4 National Renewable Energy Laboratory,
5 Princeton Plasma Physics Laboratory,
6 Stanford Linear Accelerator Facility, and
7 Thomas Jefferson National Accelerator Facility.

(b) Security officers for all contractors who hold or have held personnel security clearance within the past 5 years and who are traveling to a sensitive country.

(6) Ensure that all contractors, including those at the seven sites listed above, receive an annual counterintelligence awareness briefing and an annual security awareness briefing, regardless of whether the contractor employees hold clearances.

(7) Notify the local counterintelligence officer 30 days prior to

the start of the travel when traveling to any country where foreign monetary support is provided for the travel.

(8) Ensure employees have complied with trip closeout requirements for one trip before a subsequent official foreign trip is authorized or approved.

(9) These requirements may be waived for emergency response activities, as long as appropriate country clearances are obtained.

(10) Ensure that emergency response personnel provide briefings to appropriate offices as requested, upon return.

(11) Obtain appropriate authorization from

(a) Headquarters, Director of Safeguards and Security, when hand carrying classified material overseas;
(b) Headquarters, Director of Intelligence, when hand carrying classified foreign intelligence material overseas.

(12) Ensure blanket travel orders are issued for all personnel who might be required to respond immediately to an emergency.

(a) In controlling official foreign travel, contractors must complete the following.

(1) Enter all official foreign travel into the Foreign Travel Management System.
(2) Enter and approve all requests for official foreign travel to a sensitive country or involving a sensitive subject into the Foreign Travel Management System 30 days before the proposed departure date, or earlier as necessary, to receive appropriate and timely country clearance when one is required.
(3) Enter and approve all requests for official foreign travel to a non-sensitive country and not involving a sensitive subject into the Foreign Travel Management System 21 days before the proposed departure date, or earlier as necessary, to receive appropriate and timely country clearance when one is required.
(4) If notice of required official foreign travel is not received in time to meet the 21- or 30-day requirement, enter travel into the Foreign Travel Management System as soon as possible, and coordinate with the responsible Program Secretarial Officer or Deputy Administrator, NNSA. The responsible Program Secretarial Officer or Deputy Administrator, NNSA may require a written justification and is under no obligation to approve the travel.
(5) Within 30 days after the proposed departure date, update the Foreign Travel Management System by marking all requests for official foreign travel that have been entered into the system but were subsequently canceled or disapproved.
(6) Ensure that foreign travel will not be permitted to start unless all approvals have been finalized.

c. Contractors must comply with the following trip closeout requirements.

(1) Post-travel trip reports for all official foreign travel are required from each traveler and must be submitted within 30 days after return to duty station (see Attachment 2).

(2) The traveler must provide information regarding the actual cost of the travel in the trip report.

2. REFERENCES.

a. DOE O 110.3, CONFERENCE MANAGEMENT, dated 11-3-99.

b. Presidential Decision Directive 12, "Security Awareness and Reporting of Foreign Contacts."

c. DOE M 471.2-1B, CLASSIFIED MATTER PROTECTION AND CONTROL MANUAL, dated 1-6-99.

d. DOE 5670.3, COUNTERINTELLIGENCE PROGRAM, dated 9-4-92.

3. DEFINITIONS.

a. Blanket Travel Orders. Travel authorization that is valid for the Domestic Emergency Support Team (DEST) led by the Federal Bureau of Investigation, the Foreign Emergency Support Team (FEST) led by the Department of State, or emergency response activities that have been authorized or deployed by an emergency response officer.

b. Country Clearance. Notification from the U.S. Embassy of the country to be visited that a request to travel to that country has been approved.

c. Emergency Response. The national technical capability to respond to radiological and nuclear incidents and accidents within the United States and abroad. This capability typically supports the Department of Energy, Department of Defense, Department of State, Federal Bureau of Investigation, and other Government agencies. Because organizations must be able to deploy their emergency response capabilities without notice (i.e., no-notice), DOE emergency teams may be required to deploy within 4 hours of notification.

d. Foreign Travel Management System. The official Departmental system for tracking, monitoring, and reporting on foreign travel by Federal and contractor employees.

e. Official Foreign Travel. Approved travel (whether wholly or partly on official business) from the United States (including Alaska, Hawaii, the Commonwealths of Puerto Rico and the Northern Mariana Islands, and the territories and possessions of the United States) to a foreign country and return, travel between foreign countries, by persons, including foreign nationals, whose salaries or travel expenses or both will ultimately be funded in whole or in part by DOE or NNSA from its appropriations. Official foreign travel also includes travel funded by non-DOE or non-NNSA sources for which the traveler represents the Department or NNSA or

conducts business on behalf of the U.S. Government.

f. Responsible Program Secretarial Officer. The senior DOE Headquarters official, whose office will fund the requested travel, or if there is no DOE funding, the official who has programmatic responsibilities associated with the requested travel.

g. Sensitive Country. A country to which particular consideration is given for policy reasons. Countries may appear on the sensitive country list for reasons of national security, nuclear nonproliferation, regional instability, threat to national economic security, or terrorism support. The Office of Defense Nuclear Nonproliferation maintains this list.

h. Sensitive Subjects. Unclassified subjects/topics identified in existing Federal regulations governing export control as well as those identified by the Department as unique to its work, which involve information, activities, and/or technologies that are relevant to national security. Disclosure of sensitive subjects has the potential for enhancing weapons of mass destruction capability, leading to weapons of mass destruction proliferation, divulging militarily critical technologies, or revealing other advanced technologies that may adversely affect U.S. national economic security. The Office of Defense Nuclear Nonproliferation maintains this list.

FOREIGN TRAVEL TRIP REPORTS

Trip reports for DOE, including NNSA, employees and contractors are to consist of the two parts described below. Because of the unique nature of travel by the Secretary, Deputy Secretary, or Under Secretaries, trip reports from this travel are to be maintained by the Executive Secretary.

1. Part 1 is to be an extract of the foreign travel trip request form, with an abstract of the results of the trip.

   a. Part 1 of the trip report will be forwarded through the responsible Program Secretarial Office to the Office of Science and Technical Information (OSTI), Oak Ridge, Tennessee 37831.

   b. Part 1 of the trip report will not contain classified information.

   c. Part 1 will be included in a limited-access electronic database available to DOE/NNSA. [Once the new Foreign Travel Management System (FTMS) is in place, certain sections of Part 1 of the trip report will become automated to simplify its completion.]

   d. Part 1 of the trip report will consist of the following information in the following format:

      (1)title of the report (i.e., "Travel to___");
      (2)report date (MM,DD,YYYY);
      (3)date(s) of travel (MM,DD,YYYY);
      (4)name of all traveler(s) on this trip;

(5) position/title of the traveler;
(6) employing organization and organization code;
(7) business address including street, city, and zip code;
(8) FTMS trip number;
(9) travel destinations (include organization, facility, city, state/province, country);
(10) brief purpose of the trip (include the justification from the foreign travel request);
(11) people contacted;
(12) facilities visited;
(13) abstract (such as major highlights, benefits of the travel, results of meetings, including their locations).

2. Part 2 of the trip report will provide a complete report on and thorough analysis of the trip.

a. Part 2 should include the results of any meetings or discussions with representatives of foreign government(s) and/or company(ies).
b. When more than one traveler follows the same schedule, only one member of the party needs to report on each meeting or event that took place.
c. When appropriate, Part 2 should also include observations, conclusions, speculations, and information relating to the safety, health, and security of future travelers.
d. Part 2 of the trip report will be used for programmatic purposes and will not be forwarded to OSTI.
e. Part 2 of the trip report is to provide actual costs of the trip.
f. In addition to the above requirements, trip reports for travel by the Secretary, Deputy Secretary, or Under Secretaries must include justification for any private-sector participation in the trip and major accomplishments of the trip.

A reporting cable sent through State Department channels may also serve as Part 2 of a foreign trip report. Security and advance personnel traveling in support of the Secretary, Deputy Secretary, or Under Secretaries are exempt from the requirements of Part 2.

Fiscal Year in Which Project Was Funded by DOE	List of 35 IPP Projects Funded by DOE at the Same Institutes Which Had Been "Graduated" by the State Dept. Program in the Current or Previous Fiscal Years
2003	• Kurchatov Institute of Atomic Energy (KIAE; also called RRC-KIAE) o 2 projects (ANL-T2-120aRU and PNNL-T2-0246RU) [Note: the latter • Lebedev Institute of High Energy Physics (also called FIAN) o 1 project (LLNL-T2-0244RU) • Englehardt Institute of Molecular Biology o 1 project (PNNL-T2-0258RU) **FY2003 Total = 4 projects at 3 institutes**
2004	• All-Russian Scientific Research Institute for Experimental Physics (VNIIEF) [Note: for purposes of this analysis I have included the spinoff company Biofil with its originating institute VNIIEF.] o 1 project (LLNL-T2-0242RU) • Kurchatov Institute of Atomic Energy (KIAE; also called RRC-KIAE) o 2 projects (LLNL-T2-0239RU and ANL-T2-220RU) • Kharkiv Institute of Physics and Technology (KIPT) o 1 project (ANL-T2-0229UA) • General Physics Institute (GPI) o 1 project (INL-T2-2006RU) • Lebedev Institute of High Energy Physics (also called FIAN) o 1 project (INL-T2-2006RU) • Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry o 1 project (PNNL-T2-0243RU) • Institute of Metal Physics (IMP) o 1 project (PNNL-T2-0241UA) **FY2004 Total = 8 projects at 7 institutes (5 new)**
2005	• Khlopin Radium Institute o 1 project (BNL-T2-0336RU) • All-Russian Scientific Research Institute for Inorganic Materials named for V. Bochvar (called VNIINM or "Bochvar Institute") o 1 project (LLNL-T2-0240RU) • Kharkiv Institute of Physics and Technology (KIPT) o 1 project (ANL-T2-224RU) • All-Russian Scientific Research Institute for Experimental Physics (VNIIEF) o 2 projects (LLNL-T2-0246RU and LLNL-T2-0245RU) • Institute of Highly Pure Biopreparations (IHPBP) o 2 projects (PNNL-T2-0242RU and INL-T2-2010RU) • Englehardt Institute of Molecular Biology o 1 project (NREL-T2-0204RU)

	• Yuzhnoye-Yuzhmash KBM ("Yuzhnoe") [Note: for purposes of this analysis we are including a project here at a spinoff from Yuzhnoe called TexMet] o 1 project (KCP-T2-0219aUA) **FY2005 Total = 9 projects at 7 institutes (4 new)**
2006	• All-Russian Scientific Research Institute for Experimental Physics (VNIIEF) o 4 projects (ANL-T2-233RU, SNL-T2-205RU, KCP-T2-230RU, and BNL-T2-344RU) • Kurchatov Institute of Atomic Energy (KIAE; also called RRC-KIAE) o 1 project (DOEH-0005RU) • Ioffe Institute of Technical Physics (also called the Ioffe Physico-Technical Institute) o 1 project (KCP-T2-233RU) • Kharkiv Institute of Physics and Technology (KIPT) o 1 project (PNNL-T2-265UA) • Scientific Research Institute of Atomic Reactors (RIAR) o 1 project (PNNL-T2-0279RU) • Institute of Highly Pure Biopreparations (IHPBP) o 1 project (INL-T2-2012RU) [Note: In its spreadsheets, DOE has listed project INL-T2-2010RU as being approved as a new project in both FY2005 and FY2006. For this analysis, we have included it in the list for FY2005 and not for FY2006.] • E. O. Paton Electric Welding Institute (called "Paton") o 2 projects (KCP-T2-224RU and ORS-T2-211UA) **FY2006 Total = 10 projects at 7 institutee (3 new)**
2007	• Khlopin Radium Institute o 1 project (ANL-T2-234RU) • Kurchatov Institute of Atomic Energy (KIAE; also called RRC-KIAE) o 1 project (ANL-T2-213aRU) • General Physics Institute (GPI) o 1 project (BNL-T2-347RU) • Moscow Engineering Physics Institute (MEPHI) o 1 project (KCP-T2-0232RU) • All-Russian Scientific Research Institute for Technical Physics (VNIITF) o 1 project (KCP-T2-0232RU) [Note: for purposes of this analysis we are including a project here at a spinoff from VNIITF called CORTEC. Also, this is the same project as the one listed above at MEPHI.] **FY2007 Total = 4 projects at 5 institutes (2 new)**

Total Overlap	**FY2003-FY2007 Total = 35 projects at 17 institutes**

Country	Title	Institute	Industry Partner	Total
Armenia	Structural Innovation of Light Valves and Spatial Light Modulators	Yerevan State University, Federal Research and Production Center, Research Institute for Complex Testing of Optoelectronic Devices, Vavilov State Optical Institute	Beam Engineering	$747,700
Armenia	Optimized Deposition Processes for Protective Layers on Polyacrylic Fresnel Lenses for Concentrator Photovoltaic Modules	State Engineering University of Armenia, Kharkiv Institute of Physics and Technology	Amonix, Inc.	$750,000
Iraq	Research and Development through IRDI	Various universities and ministries	n/a	$2,250,000
Iraq	Civilian Scientific Capacity Building	Various universities and ministries	n/a	$1,700,000
Iraq	Business Development	Various universities and ministries	n/a	$3,150,000
Kazakhstan	Production of high-quality tantalum	Ulba Metallurgical Plant	Tohsoh SMD	$1,000,000
Kazakhstan	The development of pilot solar-grade silicon production to demonstrate the potential of the technology under industrial-scale conditions	Institute of Physics and Technology, All-Russian Scientific Research Institute of Chemical Technology	Solar Power Industries	$1,000,000
Kazakhstan	Antibody-Based Diagnostics and Production for High Consequence Animal Pathogens II	State Research Agricultural Institute	New Horizons Diagnostics	$800,000
Libya	Center for Mechanical Industries (CMI)	Al Janzur Center for Mechanical Industries	n/a	$1,090,000
Libya	Analytical Laboratory	Tajura Renewable Energy and Water Desalination Research Center	n/a	$205,000
Libya	Water Purification Technologies	Tajura Renewable Energy and Water Desalination Research Center	n/a	$350,000
Libya	Jefara Ground Water Management	Tajura Renewable Energy and Water Desalination Research Center	n/a	$355,000
Libya	Solar-Powered Desalination	Tajura Renewable Energy and Water Desalination Research Center	n/a	$160,000
Russia	Supply of purified Th228 for Ra224 generators	Institute of Physics and Power Engineering, Kurchatov Institute of Atomic Energy	AlphaMed Inc.	$480,000
Russia	Low Emission Advanced Power Cycle	Kurchatov Institute of Atomic Energy, Semenov Institute of Chemical Physics, Lavrentyev Institute of Hydrodynamics SB RAS, Kinetic Technologies, Ltd.	General Electric Company	$1,233,900
Russia	Optimization and validation of bioremediation of oilfield contamination by an integrated microbial and plant system	Center for Ecological Research and BioResources Development, All Russian Institute of Biological Plant Protection, Krasnodar Experimental Forestry, Institute of Biochemistry and Physiology of Micro-Organisms, State Research Center for Applied Microbiology, Research Center of Toxicology and Hygienic Regulation of Biopreparations	Chevron Corporation	$1,500,000

Russia	Computational Modeling of Blood Hydrodynamics and Aggregation Phenomena in the Human Cardiovascular System (aka Computational hemodynamics)	All Russian Scientific Research Institute of Experimental Physics, SarovLabs, National Hematology Research Center	Analysis & Design Application Co., Ltd.	$1,000,000
Russia	Solidification technologies for radioactive and chemical liquid waste treatment	V. G. Khlopin Radium Institute, Siberian Chemical Combine, Mining and Chemical Combine, All Russian Scientific Research Institute of Technical Physics, Republican Engineering Technical Center	Nochar, Inc.	$729,000
Russia	Lab scale demonstration of UREX+1a and modified TRUEX and TALSPEAK processes for LWR SNF reprocessing	V. G. Khlopin Radium Institute		$880,000
Russia	Production of TRU-containing oxide fuel pins/targets for transmutation in the BOR-60 fast reactor	All-Russian Scientific Research Institute of Atomic Reactors	Ceramic Tubular Products, LLC	$880,000
Russia	Development of Portable Gamma-Ray Spectrometers using CZT Technology for IAEA Inspection Applications	Petersburg Nuclear Physics Institute, All Russian Scientific Research Institute of Experimental Physics	Radiation Monitoring Devices	$1,027,607
Russia	Development of Laser Ultrasonic Device for Residual Stress Measurement in Welded Structures	General Physics Institute	Spectra Quest, Inc.	$1,350,000
Russia	Development of Advanced Centrifugal Pumps	Kurchatov Institute of Atomic Energy	Flowserve Corporation	$1,000,000
Russia	Development of an Unattended Multi Object Recognition System for Remote Surveillance "MORS"	General Physics Institute	Canberra Aquila, Inc.	$1,200,000
Russia	Development of a 1 MV Tandem Accelerator System for Boron Neutron Capture Therapy, Explosives Detection and other Proton Beam Based Applications.	Budker Institute of Nuclear Problems	Brookhaven Technology Group, Inc.	$1,180,000
Russia	Miniature Neutron Generator for Brachytherapy Tumor Treatment	All-Russian Scientific Research Institute of Automatics	Ion Focus Technology, Inc.	$600,000
Russia	Development of High-Specific activity and No-Carrier-Added Tin-117m for Radionuclide Therapy of Cancer	Institute of Nuclear Research, All-Russian Scientific Research Institute of Atomic Reactors, Moscow State University	Clear Vascular, Inc.	$1,500,000
Russia	Development and Engineering Scaleup of CBAT System in Russia	All Russian Scientific Research Institute of Technical Physics	NorthWest Nuclear LLC	$1,400,000
Russia	Application of Polymeric Agents for Improved Soil Decontamination at PO Mayak	State Unitarian Enterprise Moscow Scientific and Industrial Association "Radon", Mayak, Moscow State Universtiy	Biogenesis Enterprises, Inc.	$990,000

Russia	Design and Prototype Qualification of a Facility for the Production of Enriched Boron	Siberian Chemical Combine	Westinghouse Electric Company	$870,000
Russia	Manufacture of YBCO Superconducting Flexible tapes from Nanoparticle films derived from sedimentation and by Flame deposition of Nanoparticles from Solution.	Karpov Institute of Physical Chemistry - Moscow	Oxford Instruments Inc.	$990,000
Russia	Development of Technology for Effective Removal of Arsenic	Ural Process Engineering Ltd, All Russian Scientific Research Institute of Technical Physics, Academy of Chemical Defense	Fenix Technology International, Inc.	$714,000
Russia	Development and Demonstration of A Methodology and Software for Risk-Based Landuse Planning and Decision Support	V. G. Khlopin Radium Institute	Cambridge Environmental Inc.	$950,000
Russia	High Current Low Energy Beam Transport (LEBT) for Ion Implanters	Institute of High Current Electronics, Institute of Theoretical and Experimental Physics	PVI - Vacuum System Technology	$990,000
Russia	Development of The Metal Hydride Tank for Vehicles	All Russian Scientific Research Institute of Experimental Physics, V. A. Fock Institute of Physics, SarovLabs	General Motors R&D Center	$990,000
Russia	Development of Environmentally-Friendly Dry Machining Process	Moscow Steel and Alloys Institute, Moscow State Academy of Instrumental Engineering and Information, Kurchatov Institute of Atomic Energy	General Motors R&D Center	$990,000
Russia	Development Of A General Chemical Detector Using Tunable Diode Laser Spectroscopy	General Physics Institute	Canberra Aquila, Inc.	$914,500
Russia	Novel Antitumor Heterocyclic Agents, Including Flurine-Containing Compounds, Acting Via Inhibition of Protein Kinases	Chemical Diversity Research Institute, N.N. Blochin Russian Oncology Scientific Center, Zelinsky Institute of Organic Chemistry	n/a	$950,000
Russia	Demonstration of the use of Magnetic Induction Tomography Technology in Weapons and Contraband Detection Systems	Institute of Radio-Engineering and Electronics, General Physics Institute, Lebedev Physical Institute	GE Security	$650,000
Russia	Development, enhancement and production of bioinsecticde products	State Research Center for Applied Microbiology, State Research Center for Applied Microbiology, Sibbiopharm	Biological Targets, Inc.	$1,000,000
Russia	Discovery and development of novel anti-arthritic agents	Institute of Highly Pure BioPreparations, Institute of Experimental Medicine, Shermykin and Ovchinnikov Institute of Bioorganic Chemistry	Cognosci, Inc.	$350,000

Russia	Dynamic Platinum Compounds as Anticancer Agents	Institute of Highly Pure BioPreparations, Institute of Biomedical Chemistry, Research Center of Toxicology and Hygienic Regulation of Biopreparations, Shermykin and Ovchinnikov Institute of Bioorganic Chemistry	UNITECH Pharmaceuticals, Inc., Unitech	$700,000
Russia	Clinical Implementation of Accelerator Based Neutron Capture Therapy	Institute of Physics and Power Engineering	Radiation Dynamics Inc.	$1,000,000
Russia	Diamide Derivatives of Dipicolinic Acid in Polar Diluents as Actinide and Lanthanide Extractants	V. G. Khlopin Radium Institute, Institute of Physiologically Active Compounds of the Russian Academy of Sciences	n/a	$843,000
Russia	Radar Mapping of Geologic Structures from Drills	Scientific Research Institute of Measuring Systems	Stolar Horizon, Inc.	$1,150,000
Russia	Underwater Deep Sea Probe	All Russian Scientific Research Institute of Experimental Physics	Millennium Technology Inc.	$450,000
Russia	(F.I.E.L.D.S.) Frequency Modulated Continuous Wave Short Range Radar System	Moscow Institute of Engineering Physics, CORTEC	Stolar Horizon, Inc.	$850,000
Russia	Nuclear Materials Detector (NMD)	Ioffe Physico-Technical Institute, V. G. Khlopin Radium Institute, Krasnaya Zvezda Scientific Production Association	TRACE Photonics Inc.	$950,000
Russia	Development of Flexible Heaters with Improved Price Performance Characteristics for Specialty Market Niches	Mining and Chemical Combine	Thermosoft International Corporation	$950,000
Russia	Poliplen	Siberian Chemical Combine	Poliplen	$620,000
Russia	Development of New Severe Plastic Deformation Techniques for Commercial Production of Nanostructured Materials	Ufa State Aviation Technical University, All Russian Scientific Research Institute of Technical Physics, All Russian Scientific Research Institute of Experimental Physics	Metallicum LLC	$1,800,000
Russia	Actinide Nano-Particles Environmental Behavior Relevant to Safe Disposal of SNF and HLW in Advanced Nuclear Fuel Cycle	Moscow State University, Vernadsky Institute of Geochemistry and Analytical Chemistry, Frumkin Institute of Physical Chemistry and Electrochemistry		$1,099,998
Russia	Enhancing Safeguards in Reprocessing of Nuclear Fuel	All Russian Scientific Research Institute of Experimental Physics, Siberian Chemical Combine, Mayak	n/a	$500,000
Russia	Advanced Safeguards for Uranium-235 Enrichment Facilities	All Russian Scientific Research Institute of Experimental Physics, Laboratory for Microparticle Analysis	n/a	$500,000
Russia	Development of a Cross-City Communications Network	All Russian Scientific Research Institute of Experimental Physics, All Russian Scientific Research Institute of Technical Physics, Mining and Chemical Combine, Siberian Chemical Combine	n/a	$374,084
Russia	Development of Thermoelectric Materials	All Russian Scientific Research Institute of Experimental Physics	n/a	$427,691

Russia	Repair Devices for Gas Pipelines Restoration	All Russian Scientific Research Institute of Experimental Physics	n/a	$235,714
Russia	Development of Nitric Oxide Monitoring Instrumentation	All Russian Scientific Research Institute of Experimental Physics	n/a	$512,000
Russia	ERA-5 electronic borehole device	All Russian Scientific Research Institute of Experimental Physics	Binar	$500,000
Russia	Network Hardware and Software Support	Mining and Chemical Combine	n/a	$557,571
Russia	Production of Thermo Glass	Mining and Chemical Combine	n/a	$435,714
Russia	High Energy Ion Technology of Interfacial Thin Film Coatings for Electronic, Optical, and Industrial Applications	Institute of High Current Electronics	Phygen, Inc.	$506,000
Russia	Ultra-low-energy ion beam processing of materials	Institute of High Current Electronics, Bochvar All-Russian Scientific Research Institute of Inorganic Materials- Siberia Branch	4Wave, Inc.	$1,130,500
Russia	High-Efficiency, High-Power Accelerator Development	Budker Institute of Nuclear Problems	Euclid Techlabs, LLC	$1,000,000
Russia	Microbial Diversity for Novel Biotechnology Applications	VECTOR - State Research Institute of Virology and Biotechnology, SibEnzyme, Institute of Volcanology, Center for Ecological Research and BioResource Development, Durmishidze Institute of Biochemistry and Biotechnology, Institute of Microbiology	Diversa Corporation	$2,100,000
Russia	Development of Plasma Ablation for Soft Tissue and Bone Surgery	Institute of High Current Electronics	ArthroCare Corporation	$1,395,000
Russia	Nanometer Structures for Fuel Cells and Displays	Efremov Scientific Research Institute Of Electrophysical Apparatus, Agency for Technology Development	Wostec, Inc.	$999,000
Russia	Active Electromagnetic Array Technology Demonstration for Direct Hydrocarbon Detection	Soliton Scientific and Research Center, Institute of Exploration Geophysics	KMS Technologies	$1,700,000
Russia	Advanced Welding and Fabrication Techniques for Al-Li Alloys	All Russian Scientific Research Institute of Technical Physics, E.O. Paton Electric Welding Institute, Yuzhnoe State Design Office, Youzhmash Company, Kamensk-Uralski Metallurgical Plant, All-Russian Institute of Light Alloys	Boeing Space Systems	$1,500,000
Russia	Solutions for Digital Video Transmission Technology	Strela	Multimax Inc.	$670,000
Russia	Ceramic HEPA Filter	Bochvar -- All-Russian Scientific Research Institute of Inorganic Materials, V. G. Khlopin Radium Institute, Kurchatov Institute of Atomic Energy	Flanders Filters, Inc.	$1,000,000
Russia	Manufacturing and Characterization of Ultra Pure Ferrous Alloys	Levitatsia-S- LTD	Caterpillar Inc.	$1,000,000

Russia	Breast Cancer Diagnostic System: Data Analysis and Algorithm Development	Biofil	BioTelligent	$1,000,000
Russia	The Accelerator-Detector Complex for Photonuclear Detection of Hidden Explosives	Lebedev Physical Institute, Central Design Bureau, Institute of High Energy Physics, The Moscow Instrument Automation Institute, Innovative Technologies Center	Valley Forge Composite Technologies	$1,800,000
Russia	Outside Rarefaction Shock Wave Cutter for Oil-Gas Platform Removal	All Russian Scientific Research Institute of Experimental Physics	Halliburton Energy Services, Inc.	$350,000
Russia	Water Treatment Using Advanced Ultraviolet Light Sources	Institute of High Current Electronics, All Russian Scientific Research Institute of Experimental Physics	Teknichal Services, LLC	$1,000,000
Russia	Development, Manufacturing and Preparation for Serial Production of Low-Noise Seismometers	Scientific Research Institute of Impulse Technique, JSC Ramenskiy Instrument-Making Plant	Refraction Technology Inc.	$901,000
Russia	Radioactive Medical Carbon-14 Waste Management and Recovery using AC Plasma Torch Technology	Soliton Scientific and Research Center, OKBM, Institute of Electrophysics	ISOFLEX USA	$1,000,000
Russia	Development of Low Cost Transparent Ceramics for Optical Engineering Applications	Institute of Applied Physics	General Atomics	$850,000
Russia	Filament Winding of Anisogrid Fuselage Structure	Central Research Institute for Special Machinery	Boeing Space Systems	$1,000,000
Russia	Seversk Catalysts	Siberian Chemical Combine, Boreskov Institute of Catalysis, All-Russia Science Research and Design Institute of Power Engineering Technology-Novosibirsk, Plant of Chemical Concentrates	n/a	$500,000
Russia	Design for Positron Emission Tomography Center in Snezhinsk	All Russian Scientific Research Institute of Technical Physics	n/a	$401,000
Russia	Special Infrared Crystals for Medical and Sensor Applications	Znanie-Synthezis, Moscow State University, Institute for Laser and Information Technologies, Sechenov Moscow Medical Academia High Technologies Laboratory, Kuban State University	Akamai Physics	
Russia	Development of Effective Decontamination Methods and Technology	Institute for Highly Pure Biopreparatiions, VECTOR - State Research Institute of Virology and Biotechnology, Institute of Biochemistry and Physiology of Micro-Organisms	Isonics Corporation	$1,360,000
Russia	Therapeutic Monoclonal Antibodies	Research Center for Molecular Diagnostics and Therapy, Shemyakin Institute of Bioorganic Chemistry, Institute of Genetics and Selection of Industrial Organisms, State Research Center for Applied Microbiology	Battelle Memorial Institute	$839,000
Russia	Fluorinated Analogs of Bioactive Garlic Components	All Russian Research Institute of Chemistry and Technology, State Institute of Organic Synthesis Technology	Life Time Pharmaceuticals	$918,000
Russia	Variable Modulus Polyurethane and Polyisocyanurate Polymers	Nesmeyanov Institute of Organo-Element Compounds	Bailey-Parks Urethane	$900,000

Russia	Microfluidic (Lab on a Chip) PCR Array Cartridge for Biological Screening in a Hand Held Device	Engelhardt Institute of Moleuclar Biology	CombiMatrix	$1,370,000
Russia	Pesticide and Biological Control Agents for Improved Crop Production	All Russian Institute of Biological Plant Protection, All Russian Research Institute of Phytopathology	Western Ag Resources	$1,000,000
Russia	High-Performance Structural Materials for Commercial Aerospace Applications	All Russian Institute of Light Alloys, Institute of Metals Superplasticity Problems, IMASH, National Institute of Aviation Technologies, Strela	Boeing Space Systems	$1,000,000
Russia	Antibody-Based Diagnostics and Production for High Consequence Animal Pathogens	Russian State Diagnostic and Prevention Center for Human and Animal Diseases, D.I. Ivanovski Institute of Virology, All-Russian Institute for Animal Health, Institute of Experimental and Clinical Veterinary Medicine, GAMALEYA	New Horizons Diagnostics	$990,000
Russia	Development and Demonstration of Cs-131 Production and Separation Technology	All-Russian Scientific Research Institute of Atomic Reactors	Iso-Ray Medical, Inc.	$576,000
Russia	Developing a Process for producing Ultra High-Purity Cesium with Low Isotopic and Chemical Impurities from Natural (Non-Enriched) Barium Targets	Institute of Nuclear Materials	IsoRay	$540,000
Russia	Vermiculite Hydrophobization	Mining and Chemical Combine	OOO Vermiculite	$257,000
Russia	Modular Construction	Mining and Chemical Combine	SITI, Ltd.	$342,729
Russia	Micro-Arc Oxidation	Mining and Chemical Combine	JSC Russian Profile	$523,142
Russia	Development of Humanitarian Soil Dielectric Mapper	Spektr-Konversia	Stolar Research, Inc.	$1,500,000
Russia	Back Support System: An Adaptive Cushion for Relieving & Preventing Back Pain	Spektr-Konversia	Numotech, Inc.	$1,605,000
Russia	Universal Leg	Spektr-Konversia	Numotech, Inc.	$1,300,000
Russia	Optical Fiber Technology for Industrial Laser Applications	Troitsk Institute for Innovation and Fusion Research	Volius, Inc.	$1,500,000
Russia	Advanced Medical Device for Oxygen Generation	Spektr-Konversia	Numotech, Inc.	$1,000,000
Russia	Commercialization of VNIIEF Explosive Resistant Container	All Russian Scientific Research Institute of Experimental Physics	n/a	$500,000
Russia	Development of Porous Metal Dental Implants	All Russian Scientific Research Institute of Experimental Physics	n/a	$319,000
Russia	Device for Measurement of Wool Diameter	All Russian Scientific Research Institute of Experimental Physics	n/a	$260,000
Russia	Device for Measurement of Animal Geometry	All Russian Scientific Research Institute of Experimental Physics	n/a	$276,000

Russia	Development of Light and Heat Distribution Coatings	Siberian Chemical Combine	n/a	$163,000
Russia	Development of Sorbents for Cleanup of Liquid Radioactive Waste	Siberian Chemical Combine, All Russian Scientific Research Institute of Experimental Physics	n/a	$490,000
Russia	Piezoelectric Transducers for Building Monitor Systems	Siberian Chemical Combine, All Russian Scientific Research Institute of Experimental Physics	n/a	$642,000
Russia	Development of Housing Reconstruction Bureau	Mining and Chemical Combine	n/a	$343,000
Ukraine	Photonuclear production of radioisotopes	Kharkiv Institute of Physics and Technology	AlphaMed Inc.	$990,000
Ukraine	Process Development: Low Cost, Continuous Nano-Scale Purification Technology of Powdered Carbonaceous Materials for Applications in Electrochemical Energy Storage Systems and Electroconsolidation® Process Technology	L. M. Litvinenko Inst. of Physical Organic and Coal Chemistry; Kharkiv Institute of Physics and Technology; National University of Technologies and Design	Superior Graphite Company	$1,579,000
Ukraine	Ceramic forming and seals	Donetsk Institute of Physics and Engineering	Ceramatec Inc.	$900,000
Ukraine	Advanced Grinding Technology for Bio-Source Materials	TexMet	Pinnacle Technology, Inc.	$250,000
Ukraine	Flash-Butt Welding Phase II	E.O. Paton Electric Welding Institute	MAVERIX, Inc.	$707,000
Ukraine	Development of a Bio-equivalent UV Dosimeter to Monitor the Capacity for Vitamin-D Synthesis of Sunlight	Institute of Physics of the Ukrainian National Academy of Science	Rhyolite Technology Group Inc	$300,000
Ukraine	Development of Protective Coating Technologies for Gas Turbine Engine Airfoils	Pratt and Whitney – Paton	United Technologies	$1,000,000
Ukraine	Cost Effective Production of Powder Metallurgy Titanium Components for High Volume Commercial Applications	Ukraine Institute of Metal Physics; CES Ukraine Company	ADMA Products Inc	$997,000
Ukraine	Development of a Commercial Plasma Chemical Reactor in the Ukraine	Kharkiv Institute of Physics and Technology	Campbell Applied Physics, Inc	$1,000,000
Ukraine	Development and Commercialization of Straw Fired Boilers of 100-1000 kW in Ukraine	Scientific Engineering Center "Biomass" Ltd.	The Center for Strategic Alliance	$936,100
Ukraine	Evaluation of Electron Beam Physical Vapor Deposition Process (EBPVD) Process for the Fabrication of Low Cost Solid Oxide Fuel Cell (SOFC) Components	International Center for Electron Beam Technology	Fuel Cell Energy, Inc.	$970,000

Ukraine	ElectrohydraulicForming of Sheet Metal for Structural Automotive Applications	Institute of Pulse Research and Engineering; St. Petersburg Electrotechnical University; Kharkiv Aviation Institute	Ford Motor Company	$900,000
Ukraine	Improved Biological and Chemical Delivery Vehicle for Optimum Use of Soil Microflora	Zabolotny Institute of Microbiology and Virology; Interdepartmental Sceintific-Technological Center, Agrobiotech	Northwest Agricultural Products	$697,700
Uzbekistan	Medical Isotope Development at the Institute of Nuclear Physics, Tashkent	Instititute of Nuclear Physics	Isonics Corporation	$850,000

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GIPP GNEP Project Proposals

Project Number	Title / Purpose	FSU Institute	Number of years	FSU Costs $K	US Costs $K	Total $K	Status
ANL G2-002	TRU Fuel Production	RIAR	2	500	214	714	approved
ANL T2-234	Solidification technologies for radioactive and chemical liquid waste treatment	Khlopin	2	510.3	300	1000	approved
ORS T2-213	Development of Completely submersible Coolant Pumps for Integral Water Reactors	OKBM	3	830	207	1037	approved
INL G1-003	Diamide Derivatives of Dipicolinic Acid in Polar Diluents as Actinide and Lanthanide Extractants	Khlopin, IPAC	3	590	253	843	approved
ANL G2-001	Modified TRUEX and TALSPEAK processes	Khlopin, RIAR	2	500	214	714	approved
LANL T2-209	Actinide Nano-Particles Environmental Behavior Releyant to Safe Disposal of SNF	MGU, Vernadsky and Frumkin	3	1000	428.5	1428.5	approved
BNL T2-363	Storage and stabilization of UREX+1a wastes containing Cs-137, Sr-90, I-129, and Tc-99	RIAR	3	700	300	1000	
BNL T2-364	Conceptual Design of Advanced Burner Reactor and Thermal-hydraulic Code Development for Sodium Cooled Advanced Burner Reactors.	Radiation safety Scientific Center of Armenia, YSU, and Aratom	3	650	278.5	928.5	
LANL T2-211	Advanced Safeguards for Uranium-235 Enrichment Facilities	VNIIEF, Laboratory for Microparticle Analysis	2	700	300	1000	

GIPP GNEP Project Proposals

LANL T2-210	Enhancing Safeguards in Reprocessing of Nuclear Fuel	VNIIEF, Siberian Chemical Combine, Mayak	2	700	300	1000	
BNL-G3-002-RU	Advanced Pumps for Liquid Metals	(Minatom) Efremov Iscientific Research Institute of	3	630	270	900	
LBNL-G1-001-RU	Complexation and Redux Reactions of Actinides in Room -tempurature Ionic iquids: Thermodynamic, Kinetic, and Structural studies	Frumkin	3	750	250	1000	
LBNL-G2-006-UA	Studies of Chemical and Solid-State Phenomena Involved in the Growht and Fabrication do Nuclear Radiation Detection Materials	KIPT	2	450	450	900	
LLNL-G1-005-RU	Development of Prototype System for neutron radiographic control of heavy metal containers	VNIIA, FIAN, ITEP	2	492.2	210	702.2	
PNNL-G3-001-RU	Liquid Metal Reactor Steam Generator Design and Performance	Kurchatov, OKBM, IPPE, VNIPIET, Beloyarsk Nuclear Power Plant	3	591.4	354.8	946.2	
PNNL-G3-002-RU	Measurement of Thermo-Physical Properties of Actinide-Burning Fuel	Kurchatov, OKBM, VNIIM	3	721.9	433.2	1155	
PNNL-G3-003-RU	Alternative Approaches to Transient Testing for Liquid Metal Advanced Burner Reactors	Kurchatov, OKBM, IPPE, VNIIM	3	591.4	354.8	946.2	
SRNL-G2-001-RU	Multifunctional Shipping Cask for International Use	Sarov Labs, VNIIEF	3	660	283	943	

GIPP GNEP Project Proposals

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SRNL-G1-003-RU	Development of Protocols to Evaluate Metallic Waste Form Disposal Performance	Khlopin Radium Institute	3	670	287	957	

Approved,co-funded by NA-24 Front Office and GIPP

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Approved, co-funded by Office of Science and GIPP

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2000

Public Law 106-65
106th Congress

SEC. 3136. NONPROLIFERATION INITIATIVES AND ACTIVITIES.

(a) Initiative for Proliferation Prevention Program.--(1) Not more than 35 percent of the funds available in any fiscal year after fiscal year 1999 for the Initiatives for Proliferation Prevention program (IPP) may be obligated or expended by theDepartment of Energy national laboratories to carry out or provide oversight of any activities under that program.

(2)(A) None of the funds available in any fiscal year after fiscal year 1999 for the Initiatives for Proliferation Prevention program may be used to increase or otherwise supplement the pay or benefits of a scientist or engineer if the scientist or engineer--

(i) is currently engaged in activities directly related to the design, development, production, or testing of chemical or biological weapons or a missile system to deliver such weapons; or

(ii) was not formerly engaged in activities directly related to the design, development, production, or testing of weapons of mass destruction or a missile system to deliver such weapons.

(B) None of the funds available in any fiscal year after fiscal year 1999 for the Initiatives for Proliferation Prevention program may be made available to an institute if the institute--

(i) is currently involved in activities described in subparagraph (A)(i); or

(ii) was not formerly involved in activities described in subparagraph (A)(ii).

(3)(A) No funds available for the Initiatives for Proliferation Prevention program may be provided to an institute or scientist under the program if the Secretary of Energy determines that the institute or scientist has made a scientific or business contact in any way associated with or related to weapons of mass destruction with a representative of a country of proliferation concern.

(B) For purposes of this paragraph, the term ``country of proliferation concern'' means any country so designated by the Director of Central Intelligence for purposes of the Initiatives for Proliferation Prevention program.

(4)(A) The Secretary of Energy shall prescribe procedures for the review of projects under the Initiatives for Proliferation Prevention program. The purpose of the review shall be to ensure the following:

(i) That the military applications of such projects, and any information relating to such applications, is not inadvertently transferred or utilized for military purposes.

(ii) That activities under the projects are not redirected toward work relating to weapons of mass destruction.

(iii) That the national security interests of the United States are otherwise fully considered before the commencement of the projects.

(B) <<NOTE: Reports. Deadline.>> Not later than 30 days after the date on which the Secretary prescribes the procedures required by subparagraph (A), the Secretary shall submit to Congress a report on the

procedures. The report shall set forth a schedule for the implementation of the procedures.

(5)(A) The Secretary shall evaluate the projects carried out under the Initiatives for Proliferation Prevention program for commercial purposes to determine whether or not such projects are likely to achieve their intended commercial objectives.

(B) If the Secretary determines as a result of the evaluation that a project is not likely to achieve its intended commercial objective, the Secretary shall terminate the project.

(6) Funds appropriated for the Initiatives for Proliferation Prevention program may not be used to pay any tax or customs duty levied by the government of the Russian Federation. In the event payment of such a tax or customs duty with such funds is unavoidable, the Secretary of Energy shall--

(A) after such payment, submit a report to the congressional defense committees explaining the particular circumstances making such payment under the Initiatives for Proliferation Prevention program with such funds unavoidable; and

(B) ensure that sufficient additional funds are provided to the Initiatives for Proliferation Prevention Program to offset the amount of such payment.

(b) Nuclear Cities Initiative.--(1) No amounts authorized to be appropriated by this title for the Nuclear Cities Initiative may be obligated or expended for purposes of the initiative until the Secretary of Energy certifies to Congress that Russia has agreed to close some of its facilities engaged in work on weapons of mass destruction.

(2) Notwithstanding a certification under paragraph (1), amounts authorized to be appropriated by this title for the Nuclear Cities Initiative may not be obligated or expended for purposes of providing assistance under the initiative to more than three nuclear cities, and more than two serial production facilities, in Russia in fiscal year 2000.

(3)(A) The Secretary shall conduct a study of the potential economic effects of each commercial program proposed under the Nuclear Cities Initiative before providing assistance for the conduct of the program. The study shall include an assessment regarding whether or not the mechanisms for job creation under each program are likely to lead to the creation of the jobs intended to be created by that program.

(B) If the Secretary determines as a result of the study that the intended commercial benefits of a program are not likely to be achieved, the Secretary may not provide assistance for the conduct of that program.

(4) <<NOTE: Reports. Deadline.>> Not later than January 1, 2000, the Secretary shall submit to Congress a report describing the participation in or contribution to the Nuclear Cities Initiative of each department and agency of the United States Government that participates in or contributes to the initiative. The report shall describe separately any interagency participation in or contribution to the initiative.

(c) Report.--(1) <<NOTE: Deadline.>> Not later than January 1, 2000, the Secretary of Energy shall submit to the Committee on Armed Services of the Senate and the Committee on Armed Services of the House of Representatives a report on the Initiatives for Proliferation Prevention program and the Nuclear Cities Initiative.

(2) The report shall include the following:

(A) A strategic plan for the Initiatives for Proliferation Prevention program and for the Nuclear Cities Initiative, which shall establish objectives for the program or initiative, as the case may be, and means for measuring the achievement of such objectives.

(B) A list of the most successful projects under the Initiatives for Proliferation Prevention program, including for each such project the name of the institute and scientists who are participating or have participated in the project, the number of jobs created through the project, and the manner in which the project has met the nonproliferation objectives of the United States.

(C) A list of the institutes and scientists associated with weapons of mass destruction programs or other defense-related programs in the states of the former Soviet Union that the Department seeks to engage in commercial work under the Initiatives for Proliferation Prevention program or the Nuclear Cities Initiative, including--

(i) a description of the work performed by such institutes and scientists under such weapons of mass destruction programs or other defense-related programs; and

(ii) a description of any work proposed to be performed by such institutes and scientists under the Initiatives for Proliferation Prevention program or the Nuclear Cities Initiative.

(d) Nuclear Cities Initiative Defined.--For purposes of this section, the term ``Nuclear Cities Initiative'' means the initiative arising pursuant to the March 1998 discussions between the Vice President of the United States and the Prime Minister of the Russian Federation and between the Secretary of Energy of the United States and the Minister of Atomic Energy of the Russian Federation.

FY 94 Foreign Operations Appropriations Act (PL. 103-87)

UKRAINE/RUSSIA STABILIZATION PARTNERSHIPS

SEC. 575. Of the funds appropriated by this Act under the headings "Assistance for the New Independent States of the Former Soviet Union" and "Operations and Maintenance, Defense Agencies", and allocated under section 560(a) paragraphs (1) and (6), $35,000,000 should be made available for a program of cooperation between scientific and engineering institutes in the New Independent States of the former Soviet Union and national laboratories and other qualified academic institutions in the United States designed to stabilize the technology base in the cooperating states as each strives to convert defense industries to civilian applications: *Provided,* That priority be assigned to programs in support of international agreements that prevent and reduce proliferation of weapons of mass destruction: *Provided further,* That the President may enter into agreements involving private United States industry that include cost share arrangements where feasible: *Provided further,* That the President may participate in programs that enhance the safety of power reactors: *Provided further,* That the intellectual property rights of all parties to a program of cooperation be protected: *Provided further,* That funds made available by this section may be reallocated in accordance with the authority of section 560(b) of this Act.

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[CITE: 42USC2153]

TITLE 42--THE PUBLIC HEALTH AND WELFARE

CHAPTER 23--DEVELOPMENT AND CONTROL OF ATOMIC ENERGY

Division A--Atomic Energy

SUBCHAPTER X--INTERNATIONAL ACTIVITIES

Sec. 2153. Cooperation with other nations

No cooperation with any nation, group of nations or regional defense organization pursuant to sections 2073, 2074(a), 2077, 2094, 2112, 2121, 2133, 2134, or 2164 of this title shall be undertaken until--

(a) Terms, conditions, duration, nature, scope, and other requirements of proposed agreements for cooperation; Presidential exemptions; negotiations; Nuclear Proliferation Assessment Statement

the proposed agreement for cooperation has been submitted to the President, which proposed agreement shall include the terms, conditions, duration, nature, and scope of the cooperation; and shall include the following requirements:

(1) a guaranty by the cooperating party that safeguards as set forth in the agreement for cooperation will be maintained with respect to all nuclear materials and equipment transferred pursuant thereto, and with respect to all special nuclear material used in or produced through the use of such nuclear materials and equipment, so long as the material or equipment remains under the jurisdiction or control of the cooperating party, irrespective of the duration of other provisions in the agreement or whether the agreement is terminated or suspended for any reason;

(2) in the case of non-nuclear-weapon states, a requirement, as a condition of continued United States nuclear supply under the agreement for cooperation, that IAEA safeguards be maintained with respect to all nuclear materials in all peaceful nuclear activities within the territory of such state, under its jurisdiction, or carried out under its control anywhere;

(3) except in the case of those agreements for cooperation arranged pursuant to section 2121(c) of this title, a guaranty by the cooperating party that no nuclear materials and equipment or sensitive nuclear technology to be transferred pursuant to such agreement, and no special nuclear material produced through the use of any nuclear materials and equipment or sensitive nuclear technology transferred pursuant to such agreement, will be used for any nuclear explosive device, or for research on or development of any nuclear explosive device, or for any other military purpose;

(4) except in the case of those agreements for cooperation arranged pursuant to section 2121(c) of this title and agreements for cooperation with nuclear-weapon states, a

stipulation that the United States shall have the right to require the return of any nuclear materials and equipment transferred pursuant thereto and any special nuclear material produced through the use thereof if the cooperating party detonates a nuclear explosive device or terminates or abrogates an agreement providing for IAEA safeguards;

(5) a guaranty by the cooperating party that any material or any Restricted Data transferred pursuant to the agreement for cooperation and, except in the case of agreements arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, any production or utilization facility transferred pursuant to the agreement for cooperation or any special nuclear material produced through the use of any such facility or through the use of any material transferred pursuant to the agreement, will not be transferred to unauthorized persons or beyond the jurisdiction or control of the cooperating party without the consent of the United States;

(6) a guaranty by the cooperating party that adequate physical security will be maintained with respect to any nuclear material transferred pursuant to such agreement and with respect to any special nuclear material used in or produced through the use of any material, production facility, or utilization facility transferred pursuant to such agreement;

(7) except in the case of agreements for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, a guaranty by the cooperating party that no material transferred pursuant to the agreement for cooperation and no material used in or produced through the use of any material, production facility, or utilization facility transferred pursuant to the agreement for cooperation will be reprocessed, enriched or (in the case of plutonium, uranium 233, or uranium enriched to greater than twenty percent in the isotope 235, or other nuclear materials which have been irradiated) otherwise altered in form or content without the prior approval of the United States;

(8) except in the case of agreements for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, a guaranty by the cooperating party that no plutonium, no uranium 233, and no uranium enriched to greater than twenty percent in the isotope 235, transferred pursuant to the agreement for cooperation, or recovered from any source or special nuclear material so transferred or from any source or special nuclear material used in any production facility or utilization facility transferred pursuant to the agreement for cooperation, will be stored in any facility that has not been approved in advance by the United States; and

(9) except in the case of agreements for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, a guaranty by the cooperating party that any special nuclear material, production facility, or utilization facility produced or constructed under the jurisdiction of the cooperating party by or through the use of any sensitive nuclear technology transferred pursuant to such agreement for cooperation will be subject to all the requirements specified in this subsection.

The President may exempt a proposed agreement for cooperation (except an agreement arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title) from any of the requirements of the foregoing sentence if he determines that inclusion of any such

requirement would be seriously prejudicial to the achievement of United States non-proliferation objectives or otherwise jeopardize the common defense and security. Except in the case of those agreements for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, any proposed agreement for cooperation shall be negotiated by the Secretary of State, with the technical assistance and concurrence of the Secretary of Energy; and after consultation with the Commission shall be submitted to the President jointly by the Secretary of State and the Secretary of Energy accompanied by the views and recommendations of the Secretary of State, the Secretary of Energy, and the Nuclear Regulatory Commission. The Secretary of State shall also provide to the President an unclassified Nuclear Proliferation Assessment Statement (A) which shall analyze the consistency of the text of the proposed agreement for cooperation with all the requirements of this chapter, with specific attention to whether the proposed agreement is consistent with each of the criteria set forth in this subsection, and (B) regarding the adequacy of the safeguards and other control mechanisms and the peaceful use assurances contained in the agreement for cooperation to ensure that any assistance furnished thereunder will not be used to further any military or nuclear explosive purpose. Each Nuclear Proliferation Assessment Statement prepared pursuant to this chapter shall be accompanied by a classified annex, prepared in consultation with the Director of Central Intelligence, summarizing relevant classified information. In the case of those agreements for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, any proposed agreement for cooperation shall be submitted to the President by the Secretary of Energy or, in the case of those agreements for cooperation arranged pursuant to section 2121(c), 2164(b), or 2164(d) of this title which are to be implemented by the Department of Defense, by the Secretary of Defense;

(b) Presidential approval and authorization for execution of proposed agreements for cooperation

the President has submitted text of the proposed agreement for cooperation (except an agreement arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title), together with the accompanying unclassified Nuclear Proliferation Assessment Statement, to the Committee on Foreign Relations of the Senate and the Committee on Foreign Affairs of the House of Representatives, the President has consulted with such Committees for a period of not less than thirty days of continuous session (as defined in section 2159(g) of this title) concerning the consistency of the terms of the proposed agreement with all the requirements of this chapter, and the President has approved and authorized the execution of the proposed agreement for cooperation and has made a determination in writing that the performance of the proposed agreement will promote, and will not constitute an unreasonable risk to, the common defense and security;

(c) Submittal of proposed agreements for cooperation to Congressional committees

the proposed agreement for cooperation (if not an agreement subject to subsection (d) of this section), together with the approval and determination of the President, has been submitted to the Committee on Foreign Affairs of the House of Representatives and the Committee on Foreign Relations of the Senate for a period of

thirty days of continuous session (as defined in section 2159(g) of this title): Provided, however, That these committees, after having received such agreement for cooperation, may by resolution in writing waive the conditions of all or any portion of such thirty-day period; and

(d) Congressional action

the proposed agreement for cooperation (if arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, or if entailing implementation of section 2073, 2074(a), 2133, or 2134 of this title in relation to a reactor that may be capable of producing more than five thermal megawatts or special nuclear material for use in connection therewith) has been submitted to the Congress, together with the approval and determination of the President, for a period of sixty days of continuous session (as defined in section 2159(g) of this title) and referred to the Committee on Foreign Affairs of the House of Representatives and the Committee on Foreign Relations of the Senate, and in addition, in the case of a proposed agreement for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title, the Committee on Armed Services of the House of Representatives and the Committee on Armed Services of the Senate, but such proposed agreement for cooperation shall not become effective if during such sixty-day period the Congress adopts, and there is enacted, a joint resolution stating in substance that the Congress does not favor the proposed agreement for cooperation: Provided, That the sixty-day period shall not begin until a Nuclear Proliferation Assessment Statement prepared by the Secretary of State, and any annexes thereto, when required by subsection (a) of this section, have been submitted to the Congress: Provided further, That an agreement for cooperation exempted by the President pursuant to subsection (a) of this section from any requirement contained in that subsection shall not become effective unless the Congress adopts, and there is enacted, a joint resolution stating that the Congress does favor such agreement. During the sixty-day period the Committee on Foreign Affairs of the House of Representatives and the Committee on Foreign Relations of the Senate shall each hold hearings on the proposed agreement for cooperation and submit a report to their respective bodies recommending whether it should be approved or disapproved. Any such proposed agreement for cooperation shall be considered pursuant to the procedures set forth in section 2159(i) of this title.

Following submission of a proposed agreement for cooperation (except an agreement for cooperation arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of this title) to the Committee on Foreign Affairs of the House of Representatives and the Committee on Foreign Relations of the Senate, the Nuclear Regulatory Commission, the Department of State, the Department of Energy, and the Department of Defense shall, upon the request of either of those committees, promptly furnish to those committees their views as to whether the safeguards and other controls contained therein provide an adequate framework to ensure that any exports as contemplated by such agreement will not be inimical to or constitute an unreasonable risk to the common defense and security.

If, after March 10, 1978, the Congress fails to disapprove a proposed agreement for cooperation which exempts the recipient nation from the requirement set forth in subsection (a)(2) of this section, such failure to act shall constitute a failure to adopt a resolution of disapproval pursuant to section 2157(b)(3) of this title for purposes of

the Commission's consideration of applications and requests under section 2155(a)(2) of this title and there shall be no congressional review pursuant to section 2157 of this title of any subsequent license or authorization with respect to that state until the first such license or authorization which is issued after twelve months from the elapse of the sixty-day period in which the agreement for cooperation in question is reviewed by the Congress.

(Aug. 1, 1946, ch. 724, title I, Sec. 123, as added Aug. 30, 1954, ch. 1073, Sec. 1, 68 Stat. 940; amended Pub. L. 85-479, Secs. 3, 4, July 2, 1958, 72 Stat. 277; Pub. L. 85-681, Sec. 4, Aug. 19, 1958, 72 Stat. 632; Pub. L. 88-489, Sec. 15, Aug. 26, 1964, 78 Stat. 606; Pub. L. 93-377, Sec. 5, Aug. 17, 1974, 88 Stat. 475; Pub. L. 93-485, Sec. 1, Oct. 26, 1974, 88 Stat. 1460; Pub. L. 95-242, title IV, Sec. 401, Mar. 10, 1978, 92 Stat. 142; Pub. L. 99-64, title III, Sec. 301(a), (b), July 12, 1985, 99 Stat. 159, 160; renumbered title I, Pub. L. 102-486, title IX, Sec. 902(a)(8), Oct. 24, 1992, 106 Stat. 2944; Pub. L. 103-337, div. C, title XXXI, Sec. 3155(c)(1), Oct. 5, 1994, 108 Stat. 3092; Pub. L. 103-437, Sec. 15(f)(5), Nov. 2, 1994, 108 Stat. 4592; Pub. L. 104-106, div. A, title XV, Sec. 1505(g), Feb. 10, 1996, 110 Stat. 515; Pub. L. 105-277, div. G, title XII, Sec. 1225(d)(4), Oct. 21, 1998, 112 Stat. 2681-774.)

Amendments

1998--Pub. L. 105-277, Sec. 1225(d)(4)(C), in first undesignated paragraph of concluding provisions, struck out ``the Arms Control and Disarmament Agency,'' after ``Department of Energy,''.

Subsec. (a). Pub. L. 105-277, Sec. 1225(d)(4)(A), in concluding provisions, struck out ``and in consultation with the Director of the Arms Control and Disarmament Agency (`the Director')'' before ``; and after consultation'', inserted ``and'' after ``Secretary of Energy,'', substituted ``Commission. The Secretary of State'' for ``Commission, and the Director, who'', and inserted ``Each Nuclear Proliferation Assessment Statement prepared pursuant to this chapter shall be accompanied by a classified annex, prepared in consultation with the Director of Central Intelligence, summarizing relevant classified information.'' after ``nuclear explosive purpose.''

Subsec. (d). Pub. L. 105-277, Sec. 1225(d)(4)(B), in first proviso, substituted ``Nuclear Proliferation Assessment Statement prepared by the Secretary of State, and any annexes thereto,'' for ``Nuclear Proliferation Assessment Statement prepared by the Director of the Arms Control and Disarmament Agency,'' and substituted ``have been'' for ``has been''.

1996--Subsec. (a). Pub. L. 104-106 substituted ``, 2164(b), or 2164(d)'' for ``2164(b), or 2164(d)'' in concluding provisions.

1994--Pub. L. 103-437 substituted ``Foreign Affairs'' for ``International Relations'' in penultimate paragraph.

Pub. L. 103-337, Sec. 3155(c)(1)(A), substituted ``2164(c), or 2164(d)'' for ``or 2164(c)'' in penultimate paragraph.

Subsec. (a). Pub. L. 103-337, Sec. 3155(c)(1)(B), substituted ``2164(b), or 2164(d)'' for ``or 2164(b)'' in provisions following par. (9).

Pub. L. 103-337, Sec. 3155(c)(1)(A), substituted ``2164(c), or 2164(d)'' for ``or 2164(c)'' wherever appearing.

Subsec. (b). Pub. L. 103-437 substituted ``Foreign Affairs'' for ``International Relations''.

Pub. L. 103-337, Sec. 3155(c)(1)(C), inserted ``(except an agreement arranged pursuant to section 2121(c), 2164(b), 2164(c), or 2164(d) of

this title)'' after ``the President has submitted text of the proposed agreement for cooperation''.

Subsec. (c). Pub. L. 103-437 substituted ``Foreign Affairs'' for ``International Relations''.

Subsec. (d). Pub. L. 103-437 substituted ``Foreign Affairs'' for ``International Relations'' in two places.

Pub. L. 103-337, Sec. 3155(c)(1)(A), substituted ``2164(c), or 2164(d)'' for ``or 2164(c)'' in two places.

1985--Subsec. (a). Pub. L. 99-64, Sec. 301(a)(1), in provisions following par. (9) inserted ``(A) which shall analyze the consistency of the text of the proposed agreement for cooperation with all the requirements of this chapter, with specific attention to whether the proposed agreement is consistent with each of the criteria set forth in this subsection, and (B)'' after ``Assessment Statement''.

Subsec. (b). Pub. L. 99-64, Sec. 301(a)(2), inserted ``the President has submitted text of the proposed agreement for cooperation, together with the accompanying unclassified Nuclear Proliferation Assessment Statement, to the Committee on Foreign Relations of the Senate and the Committee on Foreign Affairs of the House of Representatives, the President has consulted with such Committees for a period of not less than thirty days of continuous session (as defined in section 2159(g) of this title) concerning the consistency of the terms of the proposed agreement with all the requirements of this chapter, and''.

Subsec. (d). Pub. L. 99-64, Sec. 301(a)(3), (b), substituted ``adopts, and there is enacted, a joint resolution'' for ``adopts a concurrent resolution'', inserted a further proviso directing that an agreement for cooperation exempted by the President pursuant to subsection (a) of this section from any requirement contained in that subsection shall not become effective unless the Congress adopts, and there is enacted, a joint resolution stating that the Congress does favor such agreement, inserted sentence directing that during the sixty-day period the Committee on Foreign Affairs of the House of Representatives and the Committee on Foreign Relations of the Senate shall each hold hearings on the proposed agreement for cooperation and submit a report to their respective bodies recommending whether it should be approved or disapproved, and substituted ``section 2159(i) of this title'' for ``section 2159 of this title for the consideration of Presidential submissions''.

1978--Subsec. (a). Pub. L. 95-242 amended and carried forward into pars. (3), (5), and (6) the existing provisions relating to the terms and conditions required for inclusion in all new agreements for cooperation, inserted new terms and conditions set out in pars. (1), (2), (4), (7), (8), and (9), inserted provisions empowering the President to exempt proposed agreements from any of the requirements if he determines that inclusion of the requirement would be seriously prejudicial to the achievement of United States nonproliferation objectives or jeopardize the common defense and security for any other reason, provided for Congressional rejection of any such Presidential exemption, and provided that agreements be negotiated by the Department of State, with an exception for defense related agreements.

Subsec. (b). Pub. L. 95-242 reenacted existing provisions with only minor changes in punctuation.

Subsec. (c). Pub. L. 95-242 inserted ``(if not an agreement subject to subsection (d) of this section)'' after ``the proposed agreement for cooperation'', substituted ``submitted to the Committee on International Relations of the House of Representatives and the Committee on Foreign Relations for a period of thirty days of continuous session (as defined in section 2159(g) of this title)'' for ``submitted to the Joint Committee and a period of thirty days has elapsed while Congress is in session (in computing such thirty days, there shall be excluded the days

on which either House is not in session because of the adjournment of more than three days)'', and substituted reference to ``these committees'' for reference to ``the Joint Committee'' in proviso.

Subsec. (d). Pub. L. 95-242 provided that proposed agreements be laid before the Committees on International Relations and Foreign Relations rather than the Joint Committee on Atomic Energy and that for major agreements the Nuclear Proliferation Assessment Statement, if any, prepared in conjunction with the President's review of the proposed agreement, also be submitted to the committees, and added unlettered paragraphs following subsec. (d) relating to the submission of agency views to Congressional committees and the failure of the Congress to act on agreements which exempt the recipient nation from the requirements of subsec. (a)(2).

1974--Pub. L. 93-377 substituted reference to section 2074(a) of this title for reference to section 2074 of this title in opening par.

Subsec. (d). Pub. L. 93-485 inserted reference to proposed agreements entailing implementation of sections 2073, 2074, 2133, or 2134 of this title, or in relation to reactors capable of producing more than five thermal megawatts or special nuclear material in connection therewith, inserted provision requiring the Joint Committee to submit a report to Congress of its views and recommendations respecting the proposed agreement and an accompanying proposed concurrent resolution favoring or otherwise of such agreement within the first thirty days of the sixty day period and providing that such concurrent resolution so reported shall become the pending business of the House in question within twenty-five days and shall be voted on within five days thereafter unless such House determined otherwise, and struck out the proviso that during the 85th Congress the waiting period shall be thirty days.

1964--Pub. L. 88-489 inserted reference to section 2073 in opening par.

1958--Pub. L. 85-479, Sec. 3, inserted reference to section 2121 in opening par.

Subsec. (a). Pub. L. 85-479, Sec. 3, included agreements for cooperation arranged pursuant to section 2121(c) of this title, and inserted in cl. (3) the exception in the case of agreements arranged pursuant to section 2121(c) of this title.

Subsec. (c). Pub. L. 85-681 inserted proviso clause relating to waiver waiting period.

Subsec. (d). Pub. L. 85-479, Sec. 4, added subsec. (d).

Change of Name

Reference to the Director of Central Intelligence or the Director of the Central Intelligence Agency in the Director's capacity as the head of the intelligence community deemed to be a reference to the Director of National Intelligence. Reference to the Director of Central Intelligence or the Director of the Central Intelligence Agency in the Director's capacity as the head of the Central Intelligence Agency deemed to be a reference to the Director of the Central Intelligence Agency. See section 1081(a), (b) of Pub. L. 108-458, set out as a note under section 401 of Title 50, War and National Defense.

Committee on Foreign Affairs of House of Representatives treated as referring to Committee on International Relations of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2, The Congress.

Effective Date of 1998 Amendment

Amendment by Pub. L. 105-277 effective on earlier of Apr. 1, 1999, or date of abolition of the United States Arms Control and Disarmament Agency pursuant to reorganization plan described in section 6601 of Title 22, Foreign Relations and Intercourse, see section 1201 of Pub. L. 105-277, set out as an Effective Date note under section 6511 of Title 22.

Effective Date of 1985 Amendment

Section 301(d) of Pub. L. 99-64 provided that: ``The amendments made by this section [amending this section and section 2159 of this title] shall apply to any agreement for cooperation which is entered into after the date of the enactment of this Act [July 12, 1985].''

Effective Date of 1978 Amendment

Amendment by Pub. L. 95-242 effective Mar. 10, 1978, except as otherwise provided and regardless of any requirement for the promulgation of implementing regulations, see section 603(c) of Pub. L. 95-242, set out as an Effective Date note under section 3201 of Title 22, Foreign Relations and Intercourse.

Effective Date of 1974 Amendment

Section 2 of Pub. L. 93-485 provided that: ``This Act [amending this section] shall apply to proposed agreements for cooperation and to proposed amendments to agreements for cooperation hereafter [Oct. 26, 1974] submitted to the Congress.''

Transfer of Functions

Atomic Energy Commission abolished and functions transferred by sections 5814 and 5841 of this title. See also Transfer of Functions notes set out under those sections.

Applicability of Notice and Wait Provisions

Section 3155(b) of Pub. L. 103-337, as amended by Pub. L. 104-201, div. C, title XXXI, Sec. 3160, Sept. 23, 1996, 110 Stat. 2843; Pub. L. 107-314, div. D, title XLV, Sec. 4501(b), formerly Pub. L. 104-106, div. C, title XXXI, Sec. 3154(b), Feb. 10, 1996, 110 Stat. 624, renumbered Sec. 4501(b) of Pub. L. 107-314 by Pub. L. 108-136, div. C, title XXXI, Sec. 3141(h)(2)(A)-(C), Nov. 24, 2003, 117 Stat. 1771, provided that: ``Section 123 d. of the Atomic Energy Act of 1954 (42 U.S.C. 2153(d)), as amended by subsection (c), shall not apply to a proposed agreement for cooperation under section 144 d. of such Act [42 U.S.C. 2164(d)], as inserted by subsection (a), until October 1, 1997.''

Performance of Functions Pending Development of Procedures

The performance of functions under this chapter, as amended by the Nuclear Non-Proliferation Act of 1978, Pub. L. 95-242, Mar. 10, 1978, 92 Stat. 120, not to be delayed pending development of procedures even though as many as 120 days [after Mar. 10, 1978] are allowed for establishing those procedures, see section 5(b) of Ex. Ord. No. 12058,

May 11, 1978, 43 F.R. 20947, set out under section 3201 of Title 22, Foreign Relations and Intercourse.

Fuel Cycle Evaluations; Report to Congress

Pub. L. 95-601, Sec. 9, Nov. 6, 1978, 92 Stat. 2951, directed Commission to monitor and assist, as requested, International Fuel Cycle Evaluation and studies and evaluations of various nuclear fuel cycle systems by Department of Energy in progress as of Nov. 6, 1978, and report to Congress semiannually through calendar year 1980 and annually through calendar year 1982 on status of domestic and international evaluations of nuclear fuel cycle systems, with report to include a summary of information developed by and available to Commission on health, safety, and safeguards implications of leading fuel cycle technologies.

Adequacy of Laws and Regulations Governing Export and Re-Export of Nuclear Materials, etc., and Safeguards Preventing Proliferation of Nuclear Materials

Pub. L. 93-500, Sec. 14, Oct. 29, 1974, 88 Stat. 1557, directed President to review and report to Congress within six months after Oct. 29, 1974, on all laws and pertinent regulations issued thereunder, governing the export and re-export of nuclear materials and information relating to the design and development thereof, in order to curb further domestic and international nuclear proliferation, diversion, or theft of nuclear materials.

Cooperation With Berlin

Act Aug. 1, 1946, ch. 724, title I, Sec. 125, as added by Apr. 12, 1957, Pub. L. 85-14, 71 Stat. 11; amended by Aug. 17, 1974, Pub. L. 93-377, Sec. 5, 88 Stat. 475; renumbered title I, Oct. 24, 1992, Pub. L. 102-486, title IX, Sec. 902(a)(8), 106 Stat. 2944, provided that the President could authorize the Commission to enter into agreements for cooperation with the Federal Republic of Germany in accordance with this section, on behalf of Berlin, which for the purposes of this chapter comprised those areas over which the Berlin Senate exercised jurisdiction (the United States, British, and French sectors) and the Commission could thereafter cooperate with Berlin pursuant to section 2074(a), 2077, 2094, 2112, 2133, or 2134 of this title, with provision that the guaranties required by this section were to be made by Berlin with the approval of the allied commandants.

Ex. Ord. No. 10841. International Cooperation

Ex. Ord. No. 10841, eff. Sept. 30, 1959, 24 F.R. 7941, as amended by Ex. Ord. No. 10956, eff. Aug. 10, 1961, 26 F.R. 7315; Ex. Ord. No. 12608, Sept. 9, 1987, 52 F.R. 34617, provided:

Section 1. Whenever the President, pursuant to section 123 of the Act [this section], has approved and authorized the execution of a proposed agreement providing for cooperation pursuant to section 91c, 144a, 144b, or 144c of the Act [sections 2121(c), 2164(a), 2164(b), 2164(c) of this title], such approval and authorization by the President shall constitute his authorization to cooperate to the extent provided for in the agreement and in the manner provided for in section 91c, 144a, 144b, or 144c [sections 2121(c), 2164(a), 2164(b), or 2164(c) of

this title], as pertinent. In respect of sections 91c, 144b, and 144c [sections 2121(c), 2164(b), and 2164(c) of this title], authorizations by the President to cooperate shall be subject to the requirements of sections 123d of the Act [subsec. (d) of this section] and shall also be subject to appropriate determinations made pursuant to section 2 of this order.

Sec. 2. (a) The Secretary of Defense and the Secretary of Energy are hereby designated and empowered to exercise jointly, after consultation with executive agencies as may be appropriate, the following-described authority without the approval, ratification, or other action of the President:

(1) The authority vested in the President by section 91c of the Act [section 2121(c) of this title] to determine that the proposed cooperation and each proposed transfer arrangement referred to in that section will promote and will not constitute an unreasonable risk to the common defense and security.

(2) The authority vested in the President by section 144b of the Act [section 2164(b) of this title] to determine that the proposed cooperation and the proposed communication of Restricted Data referred to in that section will promote and will not constitute an unreasonable risk to the common defense and security: Provided, That each determination made under this paragraph shall be referred to the President and, unless disapproved by him, shall become effective fifteen days after such referral or at such later time as may be specified in the determination.

(3) The authority vested in the President by section 144c of the Act [section 2164(c) of this title] to determine that the proposed cooperation and the communication of the proposed Restricted Data referred to in that section will promote and will not constitute an unreasonable risk to the common defense and security.

(b) Whenever the Secretary of Defense and the Secretary of Energy are unable to agree upon a joint determination under the provisions of subsection (a) of this section, the recommendations of each of them, together with the recommendations of other agencies concerned, shall be referred to the President, and the determination shall be made by the President.

Sec. 3. This order shall not be construed as delegating the function vested in the President by section 91c of the Act [section 2121(c) of this title] of approving programs proposed under that section.

Sec. 4. (a) The functions of negotiating and entering into international agreements under the Act [this chapter] shall be performed by or under the authority of the Secretary of State.

(b) International cooperation under the Act [this chapter] shall be subject to the responsibilities of the Secretary of State with respect to the foreign policy of the United States pertinent thereto.

United States General Accounting Office

GAO

Report to the Chairman, Committee on Foreign Relations, U.S. Senate

February 1999

NUCLEAR NONPROLIFERATION

Concerns With DOE's Efforts to Reduce the Risks Posed by Russia's Unemployed Weapons Scientists

GAO/RCED-99-54

GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-281733

February 19, 1999

The Honorable Jesse Helms
Chairman, Committee on Foreign
Relations
United States Senate

Dear Mr. Chairman:

This report responds to your request that we review DOE's implementation of its Initiatives for Proliferation Prevention program—an effort to develop nonmilitary applications for defense technologies and create jobs for weapons scientists from the former Soviet Union. The report also discusses DOE's Nuclear Cities Initiative—a new effort to create jobs in Russia's 10 closed nuclear cities. This report contains several recommendations to the Secretary of Energy.

We are sending copies of this report to the Secretaries of Energy, State, and Defense; the Director of the Office of Management and Budget; and other interested parties. We will also make copies available to others on request.

Please call me at (202) 512-3841 if you or your staff have any questions. Major contributors to this report are listed in appendix VIII.

Sincerely yours,

Gary L. Jones

(Ms.) Gary L. Jones
Associate Director, Energy,
Resources, and Science
Issues

Executive Summary

Purpose

The risk that unemployed weapons scientists in the former Soviet Union will sell sensitive information to countries or terrorist groups trying to develop weapons of mass destruction poses a national security threat to the United States. In response to this threat, the Initiatives for Proliferation Prevention program was established in 1994 to engage scientists in the former Soviet Union in peaceful commercial activities. In late 1998, the administration launched a new complementary program—the Nuclear Cities Initiative—to create jobs for displaced weapons scientists in the 10 cities that form the core of Russia's nuclear weapons complex.

The Chairman of the Senate Committee on Foreign Relations asked GAO to review (1) the costs to implement the Initiatives for Proliferation Prevention program for fiscal years 1994-98, including the amount of funds received by weapons scientists and institutes; (2) the extent to which the program's projects are meeting their nonproliferation and commercialization objectives; and (3) the Department of Energy's Nuclear Cities Initiative.

Background

The objectives of the Initiatives for Proliferation Prevention program are to (1) engage weapons scientists and institutes in productive nonmilitary work in the short term and (2) create jobs for former weapons scientists in the high-technology commercial marketplace in the long term. It is estimated that Russia's 4,000 scientific institutes employed about 1 million scientists and engineers. The program is limited in scope and is not designed to address the total problem posed by unemployed weapons scientists. Rather, it is one of several U.S. government nonproliferation efforts focused on Russia and other countries of the former Soviet Union, now known as the Newly Independent States. The program is implemented through research and development projects involving the Department of Energy's headquarters and national laboratories, U.S. industry, and scientific institutes in the Newly Independent States. A major purpose of the program is to identify commercial opportunities through these projects that will attract investment by U.S. companies. In this sense, the program functions as seed money that could lead to self-sustaining business ventures and create long-term employment in the Newly Independent States. As of December 1998, the program had funded over 400 projects in four countries. More than 80 percent of the projects were in Russia, and the remainder were in Ukraine, Belarus, and Kazakhstan.

In September 1998, the Department of Energy established, and Russia agreed to participate in, a new nonproliferation effort—the Nuclear Cities Initiative. This effort is not part of the Initiatives for Proliferation Prevention program but has many related elements. It focuses on the 10 nuclear cities that were among the most secret facilities in the former Soviet Union. The Department of Energy and other U.S. government agencies plan to help promote employment opportunities in the nuclear cities, primarily for unemployed weapons scientists, through commercial enterprises.

Results in Brief

The cost to implement the Initiatives for Proliferation Prevention program from fiscal year 1994 through June 1998 are as follows:

- Of the $63.5 million spent, $23.7 million, or 37 percent, went to scientific institutes in the Newly Independent States.
- The amount of money that reached the scientists at the institutes is unknown because the institutes' overhead charges, taxes, and other fees reduced the amount of money available to pay the scientists.
- About 63 percent, or $39.8 million, of the program's funds was spent in the United States, mostly by the Department of Energy's national laboratories in implementing and providing oversight of the program.

Regarding the extent to which the program is meeting its nonproliferation and commercialization goals, GAO found the following:

- The program has been successful in employing weapons scientists through research and development projects, but it has not achieved its broader nonproliferation goal of long-term employment through the commercialization of these projects.
- Program officials do not always know how many scientists are receiving program funding or whether the key scientists and institutes are being targeted.
- Some scientists currently working on Russia's weapons of mass destruction program are receiving program funds.
- Some "dual-use" projects may have unintentionally provided defense-related information—an outcome that could negatively affect U.S. national security interests.
- Chemical and biological projects may not be adequately reviewed by U.S. officials prior to approval.

The Nuclear Cities Initiative may cost $600 million over the next 5 years:

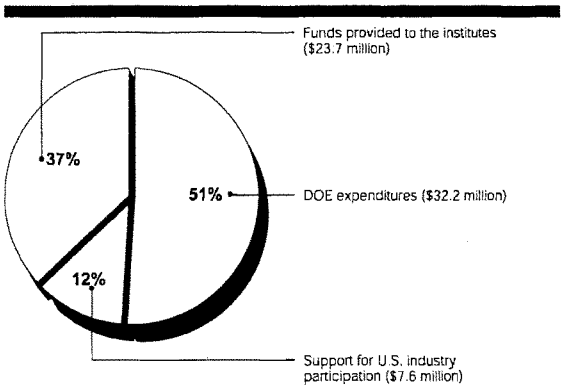
- The initiative is still largely in a conceptual phase, and it is uncertain how jobs will be created in the 10 nuclear cities because of restricted access and the current financial crisis in Russia.
- The initiative is likely to be a subsidy program for Russia for many years, given the lack of commercial success in the Initiatives for Proliferation Prevention program.

Principal Findings

About 37 Percent of Program Funds Is Reaching Institutes in the Newly Independent States

As shown in figure 1, only about 37 percent, or $23.7 million, of the $63.5 million spent for the Initiatives for Proliferation Prevention program through June 1998 went to scientific institutes. Overhead charges, taxes, and other fees reduced the funds that the scientists at the institutes received. The Department of Energy's national laboratories received about 51 percent, or $32.2 million. The remaining 12 percent, or $7.6 million, went to support U.S. industry's participation in the program. Program officials said a significant portion of program funds is provided to the national laboratories because of the oversight role played by laboratory personnel in administering the program and providing technical oversight of the projects. However, laboratory personnel told GAO that (1) the projects were usually not their primary responsibility and took up only a small percentage of their time and (2) most of their efforts were spent in the early stages of the projects developing the paperwork necessary to get the projects started.

Figure 1: Breakout of Expenditures for the Initiatives for Proliferation Prevention Program Through June 1998



Source: Department of Energy.

Impact of the Program on U.S. Nonproliferation Goals Is Uncertain

Although, in general, the program is employing weapons scientists on a part-time basis, it has not achieved its broader nonproliferation goal of long-term employment through the commercialization of projects. The lack of investment capital and markets and the inadequate training of scientists in business skills are factors impeding the program's commercial success. GAO reviewed 79 projects and determined that none was a commercial success, although several showed commercial potential, including projects dealing with solar panels, metals recycling, and technology to eradicate insects in lumber.

Nevertheless, Department of Energy officials believe that the program is successful because it has at least temporarily employed thousands of scientists at about 170 institutes and organizations throughout Russia and other Newly Independent States. However, while over one-half of program funds have been spent on implementation and oversight, GAO found that program officials do not always know how many scientists are receiving funds or whether the key scientists and institutes are being targeted. In addition, program guidance is unclear on whether funds should be going exclusively to former or previously employed weapons scientists. Some

scientists currently working on Russia's weapons of mass destruction are receiving program funds. GAO also found scientists working on nine dual-use projects that could unintentionally yield useful defense-related information and could, therefore, negatively affect U.S. national security interests. Finally, GAO found that proposed chemical and biological projects may not be adequately reviewed by U.S. officials.

Recent Nonproliferation Initiative Focuses on Russia's Nuclear Cities

The Nuclear Cities Initiative represents the most ambitious effort by the United States to assist Russia in downsizing and restructuring its vast nuclear weapons complex. According to Department of Energy officials, the initiative may cost $600 million over the next 5 years. Because the initiative is new, no funds had been spent at the time of GAO's review, but the Department expects to receive $15 million to $20 million in fiscal year 1999. The initiative will start in 3 of the 10 nuclear cities—(1) Sarov, formerly Arzamas-16, (2) Snezhinsk, formerly Chelyabinsk-70, and (3) Zheleznogorsk, formerly Krasnoyarsk-26—and expand later.

There are many uncertainties and questions related to this initiative. For example, it may be difficult for the Department of Energy to create jobs in Russia's nuclear cities, which are still considered sensitive and afford limited access to visitors. Furthermore, as a result of the August 1998 devaluation of the Russian currency, the Russian banking system has virtually collapsed, and the ability of Russian banks or the willingness of foreign investors to support job creation in the closed cities is questionable for the foreseeable future. Given the limited commercial success evidenced in the Initiatives for Proliferation Prevention program and economic conditions in Russia, GAO believes that the Nuclear Cities Initiative is likely to be a subsidy program for Russia for many years rather than a stimulus for economic development.

Recommendations

GAO is making several recommendations to the Secretary of Energy to improve the implementation and oversight of the Initiatives for Proliferation Prevention program. Specifically, GAO recommends, among other things, that the Secretary of Energy review the role and costs associated with the national laboratories' implementation and oversight of the program; require that more accurate data be obtained on the background and number of key scientists participating in the program; and clarify program guidance to determine whether scientists currently working in weapons of mass destruction programs are eligible for program funding.

GAO further recommends, among other things, that the Nuclear Cities Initiative not be expanded beyond the three nuclear cities until the Department has demonstrated that its efforts are achieving the intended results, including the creation of employment opportunities for unemployed weapons scientists.

Agency Comments

The Department of Energy, in commenting on a draft of this report, concurred with the report's findings and recommendations and said that GAO's evaluation will assist the Department in significantly strengthening the program. The Department's comments are presented in appendix VII. The Department also provided technical comments that were incorporated into the report as appropriate. The Department wanted to clarify three issues raised in the report, including (1) the dual-use potential of some projects, (2) the provision of program funding to Russian weapons scientists currently working on their own nuclear weapons programs, and (3) the lack of progress in commercializing program projects.

Regarding dual-use technologies, the Department noted that the projects identified in the report date from an earlier period of the Initiatives for Proliferation Prevention program and, at worst, might have provided only incidental military benefits to Russia. The Department noted that over the past 18 months, the program's management team has intensified its reviews of projects to reinforce understanding that they are to be directed exclusively to peaceful purposes. Furthermore, the Department said that it has been particularly sensitive to the dual-use potential of projects in the Newly Independent States' chemical and biological institutes. Nonetheless, the Department recognizes that improvements are needed in the review process and accepts GAO's recommendation to strengthen the process.

Regarding GAO's finding that the program is supplementing the salaries of some Russian scientists currently working on weapons of mass destruction, the Department stated that program policy does not allow for payment to scientists to perform weapons work and, therefore, the program is not subsidizing this work. However, the Department agreed that program guidance is unclear on whether funds should be going exclusively to former, or previously employed, weapons scientists or whether scientists currently working in weapons of mass destruction programs are eligible for program funding. The Department concurred with GAO's recommendation and said it will issue explicit program guidance on this matter within 90 days.

Finally, regarding GAO's finding that the program is not achieving its long-term commercialization goals, the Department commented that the commercialization of science and engineering projects is very difficult in the United States and much more so in Russia, particularly in the wake of the August 1998 financial crisis. The Department noted that the Initiatives for Proliferation Prevention program cannot by itself create commercial entities. It can only set measures and procedures to maximize the likelihood of their creation by U.S. industry. GAO's report recognizes the challenges faced by the Department in commercializing projects in Russia and other Newly Independent States. Given that commercialization is one of the purposes of the program, GAO recommends that the Department reevaluate the large number of projects and eliminate those that do not have commercial potential. The Department concurred with this recommendation.

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Abbreviations

DOD	Department of Defense
DOE	Department of Energy
GAO	General Accounting Office
IPP	Initiatives for Proliferation Prevention
ISTC	International Science and Technology Center
MINATOM	Russian Ministry of Atomic Energy
NIS	Newly Independent States
USIC	U.S. Industry Coalition
VECTOR	State Research Center of Virology and Biotechnology
VNIIEF	All-Russian Scientific Research Institute of Experimental Physics
VNIIGAZ	All-Russian Scientific Research Institute of Natural Gases and Gas Technologies
VNIINM	All-Russian Scientific Research Institute of Inorganic Materials

United States Government Accountability Office
Washington, DC 20548

October 11, 2006

The Honorable Samuel Bodman
Secretary of Energy
1000 Independence Ave., SW
Room 4H-051
Washington, D.C. 20585

Attention: Ms. L. Dianne Williams
Audit Liaison Specialist
Office of Internal Review
Office of the Chief Financial Officer

Dear Mr. Secretary:

The Government Accountability Office is beginning work on the Initiatives for Proliferation Prevention (IPP) program. The engagement code for this work is 360770. We are beginning this work on the initiative of the Comptroller General and after receiving a request from Representative Bennie G. Thompson.

We were asked to assess various aspects of the IPP program, including the number of projects underway and their long-term commercial results; how IPP has broadened the scope of its activities to address weapons experts from non-former Soviet countries; the current and projected program costs, including funds spent in the recipient countries; and the challenges facing the IPP program and the measures being taken to overcome those impediments.

We anticipate working primarily with DOE's Office of Defense Nuclear Nonproliferation and the various national laboratories participating in the IPP program.

We would appreciate your notifying the appropriate offices in your agency and identifying a point of contact for this engagement. We expect to begin work on these issues immediately and would like to hold the entrance conference as soon as possible. I will be directing this engagement and can be reached at 202-512-3841 or aloisee@gao.gov.

If you have any questions or need additional information, please contact Glen Levis, Assistant Director, 202-512-6961, levisg@gao.gov, or Preston Heard, Analyst-In-Charge, 202-512-9367, heardp@gao.gov.

Sincerely,

for

Gene Aloise
Director, Natural Resources
and Environment

United States Government Accountability Office

GAO

Report to the Chairman, Committee on Homeland Security, House of Representatives

December 2007

NUCLEAR NONPROLIFERATION

DOE's Program to Assist Weapons Scientists in Russia and Other Countries Needs to Be Reassessed

This Report Is Temporarily Restricted Pending Official Public Release.

GAO-08-189

December 2007

GAO
Accountability·Integrity·Reliability
Highlights

Highlights of GAO-08-189, a report to the Chairman, Committee on Homeland Security, House of Representatives

NUCLEAR NONPROLIFERATION

DOE's Program to Assist Weapons Scientists in Russia and Other Countries Needs to Be Reassessed

Why GAO Did This Study

To address concerns about unemployed or underemployed Soviet-era weapons scientists in Russia and other countries, the Department of Energy (DOE) established the Initiatives for Proliferation Prevention (IPP) program in 1994 to engage former Soviet weapons scientists in nonmilitary work in the short term and create private sector jobs for these scientists in the long term. GAO assessed (1) DOE's reported accomplishments for the IPP program, (2) DOE's exit strategy for the program, and (3) the extent to which the program has experienced annual carryovers of unspent funds and the reasons for any such carryovers. To address these issues, GAO analyzed DOE policies, plans, and budgets and interviewed key program officials and representatives from 22 Russian and Ukrainian institutes.

What GAO Recommends

GAO recommends, among other things, that DOE assess the continuing need for the IPP program with input from other federal agencies, including State and the intelligence community. DOE and State generally agreed with GAO's recommendations, although DOE disagreed with the need to reassess the IPP program. However, the nature, scope, and volume of problems GAO identified during the course of its review necessitates such a reassessment to ensure that limited IPP program funds are directed to the scientists and institutes of highest proliferation risk.

To view the full product, including the scope and methodology, click on GAO-08-189. For more information, contact Gene Aloise at (202) 512-3841 or aloisee@gao.gov.

What GAO Found

DOE has overstated accomplishments for the 2 critical measures it uses to assess the IPP program's progress and performance—the number of scientists receiving DOE support and the number of long-term, private sector jobs created. First, although DOE claims to have engaged over 16,770 scientists in Russia and other countries, this total includes both scientists with and without weapons-related experience. GAO's analysis of 97 IPP projects involving about 6,450 scientists showed that more than half did not claim to possess any weapons-related experience. Furthermore, officials from 10 Russian and Ukrainian institutes told GAO that the IPP program helps them attract, recruit, and retain younger scientists who might otherwise emigrate to the United States or other western countries and contributes to the continued operation of their facilities. This is contrary to the original intent of the program, which was to reduce the proliferation risk posed by Soviet-era weapons scientists. Second, although DOE asserts that the IPP program helped create 2,790 long-term, private sector jobs for former weapons scientists, the credibility of this number is uncertain because DOE relies on "good-faith" reporting from U.S. industry partners and foreign institutes on the number of jobs created and does not independently verify the number of jobs reported to have been created.

DOE has not developed an exit strategy for the IPP program, even though officials from the Russian government, Russian and Ukrainian institutes, and U.S. companies raised questions about the continuing need for the program. Importantly, a senior Russian Atomic Energy Agency official told GAO that the IPP program is no longer relevant because Russia's economy is strong and its scientists no longer pose a proliferation risk. DOE has not developed criteria to determine when scientists, institutes, or countries should "graduate" from the program. In contrast, the Department of State (State), which supports a similar program to assist Soviet-era weapons scientists, has assessed participating institutes and developed a strategy to graduate certain institutes from its program. Instead of finding ways to phase out the IPP program, DOE has recently expanded the program to include new countries and areas. Specifically, in 2004, DOE began providing assistance to scientists in Iraq and Libya. In addition, the IPP program is working with DOE's Office of Nuclear Energy to develop projects that support the Global Nuclear Energy Partnership—a DOE-led international effort to expand the use of civilian nuclear power.

In every fiscal year since 1998, DOE carried over unspent funds in excess of the amount that the Congress provided for the program. For example, as of September 2007, DOE carried over about $30 million in unspent funds—$2 million more than the $28 million that the Congress had appropriated for the IPP program in fiscal year 2007. Two main factors have contributed to this recurring problem—lengthy review and approval processes for paying former Soviet weapons scientists and delays in implementing some IPP projects.

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Abbreviations

CRDF	U.S. Civilian Research and Development Foundation
DCAA	Defense Contract Audit Agency
DOE	Department of Energy
EXACT	Expertise Accountability Tool
GNEP	Global Nuclear Energy Partnership
ILAB	Inter-Laboratory Board
IPP	Initiatives for Proliferation Prevention
ISTC	International Science and Technology Center
NAS	National Academy of Sciences
NNSA	National Nuclear Security Administration
STCU	Science and Technology Center in Ukraine
USIC	United States Industry Coalition
WMD	weapons of mass destruction

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To: President George W. Bush
United States of America

To: President V.V. Putin
Russian Federation

Transmittal of the
Report of the United States and Russian Federation
Joint Working Group on the Development of a Bilateral Action Plan
To Enhance Global and Bilateral Nuclear Energy Cooperation

December 15, 2006

At the St. Petersburg, Russia, G8 Summit on July 15, 2006, you directed us to establish a joint working group to develop a bilateral action plan for implementing our respective initiatives to enhance global and bilateral nuclear energy cooperation by December 15, 2006, and furthermore, at the Hanoi meeting on November 19, 2006, you entrusted us to accelerate implementation of our joint cooperation.

In our national strategies, both the United States and Russia see a strong need and role for nuclear power through the 21st century. Such commonality of views stems from concerns related to nonproliferation, energy security, sustainability, international stability, and environmental security. The joint working group has found considerable commonality in the research and development of the two countries that should provide a strong basis for meaningful cooperation.

The report of the joint working group outlines national strategies in nuclear power, identifies the common bases for U.S.-Russian cooperation in advanced reactors, exportable small and medium reactors, nuclear fuel cycle technologies, and nonproliferation, and defines a plan for cooperation.

The joint working group recommends that in the Winter and Spring 2007 subgroups be formed and workshops held to further define the technical content of the cooperative programs. The Provisional Action Plan for 2007 is included as Appendix A of the report.

Having completed the assigned task, the attached report of the joint working group is respectfully submitted to you.

Secretary Samuel W. Bodman
United States Department of Energy

Director Sergey V. Kiriyenko
Federal Atomic Energy Agency of the Russian Federation

Report of the U.S.-Russian Civil Nuclear Energy Working Group: A Bilateral Action Plan to Enhance Global and Bilateral Nuclear Energy Cooperation

1. Introduction

In early 2006, the Presidents of the Russian Federation and the United States of America set forth--independently of each other--Initiatives concerning global nuclear energy expansion aimed at pursuing clean sustainable development in the world and concurrently addressing nonproliferation issues in a reliable manner. Based on the uniformity of the proposed Initiatives in terms of their goals and the similarity of a number of proposed solutions, the Presidents of the United States and Russia have articulated their common vision regarding the peaceful use of atomic energy while strengthening nuclear nonproliferation and have declared the intention of both countries to cooperate on longer term nuclear energy development. Their mutual goals are expressed in the following quotations.

> *"Advancing nuclear energy will require further development of innovative technologies that reduce the risk of proliferation, provide for safe management of waste, are economically viable, and are environmentally safe."* [1]

> *"The Global Nuclear Energy Partnership aims to:... Recycle nuclear fuel using new proliferation-resistant technologies to recover more energy and reduce waste....Encourage the growth of prosperity and sustainable development around the world."* [2]

> *"...Development of global nuclear energy infrastructure capable of providing equal access to nuclear energy for all concerned parties under sustainable compliance with nonproliferation requirements."* [3]

> *"...We will work with our partners to help developing countries meet their growing energy needs by providing them with small-scale reactors that will be secure and cost-effective. We will also ensure that these developing nations have a reliable nuclear fuel supply."* [4]

> *"The United States and the Russian Federation intend to work together, actively involving the IAEA, to allow all nations to enjoy the benefits of nuclear energy without pursuing uranium enrichment and reprocessing capabilities."* [1]

In accordance with the Presidential Checklist approved by the Presidents of Russia and the United States on 15 July 2006 in St. Petersburg, a U.S.-Russian Working Group has been established and has developed a Bilateral Action Plan (this report) for implementing nuclear energy cooperation.

Implementing this Action Plan will:

- ***Promote sustainable and safe nuclear energy use and expansion, in the U.S., Russian Federation, and worldwide, while strengthening nuclear nonproliferation and effectively addressing waste management; through bilateral cooperation to,***

- ***Demonstrate advanced reactors, fuel cycle, and safeguards technology concepts, and develop associated criteria and principles in the context of a common vision for the structure of the global nuclear energy system of the future.***

A graphical representation of the Bilateral Action Plan structure is provided below. It shows clearly the interconnection and subordination of individual Action Plan components.

Bilateral Action Plan Structure

Demonstrate advanced reactors, fuel cycle, and safeguards technology concepts, and develop associated criteria and principles in the context of a common vision for the structure of the global nuclear energy system of the future.					
Principal Areas of Cooperation					
Exportable small- and medium-power reactors	*Advanced fast spectrum reactors*	*Integrated nonproliferation and safeguards concepts, methodology and technology*	*New types of fuel for fast spectrum reactors*	*New technologies for spent nuclear fuel reprocessing, separations (into fractions), transmutation and waste isolation*	
Short-Term Cooperative Focus Areas					
Development of unified requirements for safety and nonproliferation for small and medium nuclear power plants offered for export	*Joint experiments with transuranic fuels and structural materials*	*Development of methodology for establishing international nuclear fuel services centers*	*Development of new monitoring, control and accounting technologies*	*Increasing efficiency and safety of fast spectrum reactors*	*Development of unified requirements for the methods and technologies of spent nuclear fuel reprocessing and ultimate waste isolation*

The Working Group co-chairs are U.S. Assistant Secretary of Energy Dennis Spurgeon and Rosatom Deputy Director Nikolay Spasskiy. The U.S. membership of the Working Group is comprised of representatives of the Department of Energy, Office of Nuclear Energy (DOE/NE), the National Nuclear Security Administration Office of Defense Nuclear Nonproliferation (NNSA/NA-20), the Department of State, and the lead national laboratory for technical support. Representatives of the Russian side include Rosatom, Rostekhnadzor, Ministry of Foreign Affairs, and the Ministry of Defense.

At the technical level, the group's efforts and implementation of the action plan are supported by an expert team, composed of appropriate representatives of DOE and national laboratories participating in the Global Nuclear Energy Partnership (GNEP) Program and representatives of Russian organizations engaged in the implementation of President Vladimir Putin's initiative. To support implementation efforts by the expert team, issues to be addressed are arranged by areas (for example, nuclear fuel issues, spent nuclear fuels management, exportable reactors, etc.), in accordance with which a number of specialized expert subgroups are established. The membership of these subgroups will include representatives of specific U.S. national laboratories and Russian institutes conducting research and development in relevant areas. The Working Group will provide coordination and prioritization of subgroup activities.

2. Legal Framework for Cooperation

The Working Group notes that achieving the objectives established by the Presidents in the area of nuclear energy expansion requires large-scale cooperation in science and technology, including, *inter alia*:

- information exchange,
- mutual visits to scientific facilities and research centers, and
- transfer of source materials or special nuclear materials and equipment.

The Working Group recognizes that full implementation of this large-scale cooperation depends on the availability of the necessary legal framework (including a DOE – Rosatom research and development agreement with appropriate participation of Rostekhnadzor, which would include appropriate provisions for the protection and allocation of intellectual property, and, for most transfers of nuclear material or equipment, a government-to-government agreement on cooperation in the peaceful uses of nuclear energy) and supports the efforts to negotiate such agreements. These agreements will open the way to a consolidation of efforts by research and industry communities of both countries concerning the technical elements of the implementation plan for the proposed initiatives.

At the same time, in view of the dramatically changing situation in the global energy industry and its nuclear component, which imposes the need to accelerate our joint efforts, experts of the Working Group recognize the rich history of our past cooperative efforts and agree that it makes sense to identify and develop initial cooperation in areas authorized under existing legal and regulatory frameworks and to make use of existing mechanisms. Thus, for example, it may be possible to join our efforts on specific ongoing international projects, such as International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) and Generation IV

International Forum (GIF). In addition, the option of implementing individual projects on a contract basis and obtaining necessary export authorizations and licenses should be used in situations where the referenced international agreements are not required to proceed. Cooperative work conducted under other bilateral or multilateral arrangements should not be discarded either, as this work could receive a new impetus and be deepened by including it in the scope of the Action Plan to be developed by the Working Group.

Notwithstanding our countries' commitment to the most expedient deployment of a joint action program, expert consultations have identified the need to apply a cautious approach to the issue of legal and regulatory frameworks. Any initiation of active cooperation in science and technology must be undertaken in a manner that does not conflict with national nuclear laws and regulations.

3. Areas of Cooperation

3.1 Developing a Common Vision for the Future Global Nuclear Energy System

Bearing in mind the large scale of objectives set forth by the Initiatives, their respective commonality, but also the existence of significant differences in specific technical approaches to nuclear energy development, it is important first of all to begin efforts to outline a common vision of the future global system for nuclear energy. This effort by two leading developed nuclear countries will facilitate agreements on common approaches to future efforts. An example includes the development of agreed criteria and requirements for the nuclear energy system under development, without which it will be impossible to have efficient large-scale technical cooperation in place. In addition, developing such a common vision would demonstrate the compatibility of the Initiatives and our countries' commitment to addressing global energy problems. This includes a shared commitment to enabling countries to have assured access to the benefits of nuclear energy while strengthening the nonproliferation regime. An important way to accomplish this is discouraging the further spread of sensitive nuclear fuel cycle capabilities (enrichment and reprocessing) by developing comprehensive nuclear fuel services (e.g. supply and take-back).

The Working Group notes that the future nuclear energy concept to be developed is global in nature and, consequently, must be developed in cooperation with other interested countries. Such work can be implemented at 3 levels:

1. Developing the proposed concept in a bilateral format.
2. Joint work with other nuclear developed countries (the format of such cooperation is to be determined).
3. Development of the concept in cooperation with other interested countries, for example within the frameworks of the INPRO and GIF international projects.

Such efforts should serve as a basis for nuclear cooperation in the future and, therefore, should be initiated immediately. In addition, because of its essentially systemic and conceptual nature this effort would not require an additional legal framework for joint activities. A subgroup should be established under the auspices of the Working Group for developing the system vision as well as criteria and requirements to apply to the future system and its elements.

3.2 Principal Areas of Cooperation in Science and Technology

On the basis of already identified common elements in both countries' vision of the future architecture for the global nuclear energy system, the Working Group has determined the following avenues for bilateral cooperation:

- development of exportable small- and medium-yield reactors, sustainable in terms of safety and nonproliferation;
- use of advanced fast spectrum reactors;
- development and demonstration of new nuclear fuels for fast reactors and processes for their fabrication;
- development and demonstration of advanced methods for the reprocessing (recycling) of spent nuclear fuel, technologies of separation (into fractions) and transmutation, as well as for ultimate waste isolation; and
- development of nonproliferation and safeguard concepts, methodology and technology.

These avenues are critical for the success of practical implementation of the proposed Initiatives, and they will be split into an increasing number of individual projects and tasks as long as the implementation progresses. This being said, the Working Group underscores its understanding that major efforts along these avenues will be carried out only after the necessary legal and regulatory framework has been established and sufficient amounts of funding have been appropriated. At the same time, preparatory work (developing uniform approaches, determining the scope of cooperative research, carrying out preliminary contractual negotiations) must be initiated right now so we can implement large-scale cooperation without any delay as soon as legal and financial issues have been resolved.

3.3 Specific Areas of Short-Term Bilateral Cooperation

As indicated above, the Working Group has noted the need to accelerate joint efforts and develop cooperation at this stage in the areas authorized under the existing legal framework. Attention has been paid to the following opportunities:

- cooperation currently conducted under bilateral or multilateral arrangements, which could receive a new impetus and be deepened through inclusion in the scope of the Action Plan being developed by the Working Group;
- consolidation of our efforts on individual projects under the auspices and within the existing legal frameworks for international projects (some potential examples are listed in Section 2); and
- implementation of individual projects on a contractual basis, subject to obtaining necessary export authorizations and licenses.

The following specific technical projects have been singled out by experts of the Working Group

as appropriate for initiation as soon as possible, subject to availability of necessary funding.

3.3.1 Irradiating specimens of U.S.-designed transuranic fuels and structural materials on the basis of a Russian experimental unit (RIAR, BOR-60) for the purpose of their joint post-irradiation examination.

An individual contract can be concluded for implementing this experiment taking into account nuclear safety requirements and obtaining appropriate export authorization. Another possibility has also been noted. We could carry out such work by engaging a U.S. laboratory in a Russian-French transmutation program, currently implemented by RIAR and vested with the necessary legal status. To support this project, it is appropriate to establish a special working subgroup to take responsibility for the larger scope of objectives provided for in 3.2 above—development of new nuclear fuels for fast reactors and processes for their fabrication.

3.3.2 Developing nonproliferation and safety criteria and requirements to apply to small and medium nuclear power plants offered for export to third countries.

This project can establish uniform principles and approaches to developing such reactors in terms not only of safety and nonproliferation but also in terms of commercial attractiveness for third countries.

Activities could be started along this avenue using appropriate existing frameworks (some potential examples are listed in Section 2). Experts also noted the logic of engaging the International Atomic Energy Agency (IAEA) in this effort (after initial bilateral work), since it has a considerable track record and possesses databases on diverse nuclear power plant-related criteria and requirements. Experts also noted the recent IAEA General Conference resolutions calling on Member States to develop such reactors under the auspices of the IAEA and on the Agency to develop common user requirements through the INPRO project. Establishing a working subgroup has also been recommended for facilitating this task.

3.3.3 Developing a methodology for establishing international nuclear fuel cycle service centers.

This topic is of primary importance in addressing one of the major objectives of the initiatives—discouraging third countries from developing uranium enrichment and spent nuclear fuel reprocessing technologies by means of establishing, with due account of national legislation, a commercially attractive international nuclear fuel cycle service network. It is necessary to develop a single approach to the applicability of safeguards to such centers and services, methods of assuring delivery guarantees for consumers, making such centers commercially attractive, guaranteeing their physical protection, etc., recognizing that many related proposals have been made within the international community. Efforts in this area will also be supported by an individual working subgroup. This subgroup is expected to be engaged in active working communication—primarily with the IAEA and major suppliers (after initial bilateral development)—for developing approaches to fuel services and to the applicability of safeguards to international centers and associated fuel cycle facilities.

3.3.4 Developing new technologies and methodologies for monitoring, accounting for, and controlling materials across the entire fuel cycle for the future global nuclear energy system.

This topic is important in view of the use of such new technologies to support the operation of international nuclear fuel cycle service centers. An objective to achieve unification of measurement and control systems is also proposed in order to facilitate operation in a "single coordinate system" when deploying the future global nuclear energy system. Ultimately, in the Working Group's opinion, efforts in this area should result in developing an essentially new automated system for a virtually real-time process of monitoring and control.

3.3.5 Advancing the efficiency and safety of fast spectrum reactors.

The Working Group recognizes that a range of topics are of mutual joint interest. These include thermal efficiency, capital cost reduction, safety by design analysis techniques, large component testing, passive cooling and safety features, critical experiments and nuclear data. However, the Working Group notes that full scale technical cooperation in this area depends on the availability of the required legal framework. Additional discussions are required to determine which of these areas can be pursued as a part of short term cooperation under existing legal and regulatory frameworks and mechanisms. Appendix A includes a proposed workshop to explore this area further and identify specific potential opportunities. Based on the results of the workshop a decision will be made whether it makes sense to establish an appropriate specific subgroup.

3.3.6 Developing and demonstrating advanced technologies for processing spent fuel from current and future generation power reactors.

This topic addresses a key element of the common vision and is directed toward the development and practical demonstration of processing methods that support that vision. This includes not only chemical separations (into fractions) methods but the practical aspects of emission controls and production of robust waste forms for ultimate isolation. In the future cooperation is expected to range from technical workshops to collaborative experiments on key process features, carried out in both U. S. and Russian Federation laboratories. While the Working Group acknowledged the importance of this area to the future global nuclear energy system and expressed an interest in proceeding with cooperation as soon as possible, it will be necessary to ascertain whether necessary legal frameworks are available for this cooperation. Therefore, a workshop (included in Appendix A) will be required to identify specific projects of mutual interest and short-term work that could proceed using existing legal and regulatory frameworks and mechanisms. The Working Group noted that one of the possible areas of cooperation for the near-term is joint development of requirements (as a part of the common vision development) for the methods and technologies of spent nuclear fuel reprocessing and ultimate waste isolation.

4. Establishing Technical Subgroups

The following subgroups are proposed to enable the short-term bilateral cooperation in the areas described in Section 3 while laying the groundwork for longer-term planning and cooperative efforts. The composition of the subgroups will be modified as appropriate.

4.1 Global Nuclear Energy System Concept Development Subgroup

This subgroup will focus on developing a common vision for the future global nuclear energy system as well as criteria and requirements for such a system and its individual components. From the Russian side, this team will be staffed with representatives of IPPE, Kurchatov Institute, TsNII AtomInform, Science and Technology Center of Nuclear and Radiation Safety, and NIKIET (subject to formal clearance)—among others. U.S. participants are to be determined.

4.2 Transuranic Fuel Subgroup

In the initial phase, the objective of this group will be to implement the cooperation described in 3.3.1, including arrangements to conduct in the near future:

- the first workshop to identify objectives and conditions of the experiment; and
- consultations on a number of technical issues including determining fuel composition, content of elements, location of its fabrication (an option of manufacturing it in Russia is possible in order to avoid transportation), and irradiation techniques (in targets or incorporated in BOR-60 assemblies), etc.

From the Russian side, representatives of RIAR and Bochvar Institute (VNIINM) will be included, among others, in the subgroup (subject to formal clearance). U.S. participants are to be determined.

4.3 Exportable Small and Medium Nuclear Power Plants Subgroup

This group will work towards developing systemic criteria and requirements for exportable small and medium nuclear power plants. Representatives of IPPE, OKBM, NIKIET, OKB Gidropress, Science and Technology Center of Nuclear and Radiation Safety and Kurchatov Institute will be included in the subgroup (subject to formal clearance) from the Russian side. U.S. participants are to be determined.

4.4 Subgroup on the Methodology of Establishing International Nuclear Fuel Service Centers

From the Russian side, the subgroup will include representatives from IPPE, Science and Technology Center of Nuclear and Radiation Safety and certain Rosatom departments and facilities (subject to formal clearance). U.S. participants are to be determined.

4.5 Subgroup on Advanced Monitoring, Control and Accounting Technologies Throughout The Nuclear Fuel Cycle

From the Russian side, the subgroup will include representatives from Kurchatov Institute, VNIINM, TsNII Atominform, Science and Technology Center of Nuclear and Radiation Safety and NIKIET (subject to formal clearance). U.S. participants are to be determined.

4.6 Fast Spectrum Reactors Subgroup

This working subgroup will be established as appropriate; a decision will be made based on the results of the workshop held to evaluate areas of mutual interest, possible project activities, and appropriateness of existing legal and regulatory frameworks and mechanisms.

4.7 Advanced Spent Fuel Processing and Waste Management

Because the issues of spent fuel reprocessing and waste management are among the key elements of bilateral cooperation, the working group plans to conduct a specialized workshop in 2007 to identify which areas of cooperation are possible and can be implemented in the near term within the existing legal frameworks.

5. Milestones for 2007

Milestones for initial joint work have been identified and are presented in Appendix A; this ambitious set of milestones clearly demonstrates the interest and commitment of both the U.S. and the Russian Federation to near-term initiation of meaningful collaboration. It is understood that these milestones are a work in progress and will continue to be refined and are contingent on adopting an agreed-upon decision for providing sufficient funding for the work. Venues for meetings and workshops as well as terms and conditions of their organization will be determined individually on a per-case basis.

6. Summary

The Working Group will assure that the needed integration of the joint activities occurs. This will enable implementing the Presidents' initiatives to achieve the mutually recognized benefits of global nuclear energy expansion while addressing nonproliferation issues in a reliable manner. Additional activities will be added as the cooperation matures.

7. References

1. Joint Statement by President George W. Bush and President V. V. Putin on Cooperation in the Peaceful Uses of Nuclear Energy and Countering Nuclear Proliferation, St. Petersburg, Russia, 15 July 2006.

2. Fact Sheet on Global Nuclear Energy Partnership Initiative (www.energy.gov/media/GNEP factsheet.pdf).

3. Russian President's Initiative, 25 January 2006, St Petersburg.

4. U.S. President's Radio Address on Global Nuclear Energy Partnership.

Dennis R. Spurgeon

D. Spurgeon, Assistant Secretary for Nuclear Energy, U.S. Department of Energy

Date: 11 December 2006

N. Spasskiy, Deputy Director of Federal Atomic Energy Agency, Russian Federation

Date: 13. 12. 2006

Appendix A
Proposed Actions and Milestones for 2007

Proposed Delivery Date	Proposed Actions
December 2006–January 2007	1. Identify membership of the subgroup for developing a Common Vision for the future global nuclear energy system as well as criteria and requirements for such a system in general and its individual components. Conduct the first working meeting separately—U.S. members in the United States and Russian members in Moscow.
	2. Identify membership of the following subgroups: A: Transuranic Fuels, B: Exportable Reactors small and medium power, requirements and criteria, C: International Nuclear Fuel Services includes development of methodology for establishment of international fuel cycle services centers, D: Monitoring, Control & Accounting Technologies.
February 2007 *NOTE: Workshops A, B, C, D, and E are proposed to be held concurrently.*	1. Conduct workshops in the areas of: A: Common Vision of the future global nuclear energy system (U.S. and Russian specialists will present their concepts and proposals), B: Transuranic Fuels Development, including preparation of objectives for experiments and irradiation, conditions of the experiment, and schedule of joint activities, C: Fast Reactor Safety for reactors with higher minor actinide content, D: Advanced Spent Fuel Processing & Waste Management for the purpose of planning subsequent activities, including establishment of a subgroup, E: Nuclear Data of Actinides.
March 2007	1. Write Joint Report – summarizing outcome of Feb 2007 workshops including recommendations on possible joint research objectives, activities, schedule and deliverables for each side.

	2. Prepare terms of reference from the U.S. side for the transuranic fuel irradiation experiments.
April 2007	1. Arrange a joint workshop with appropriate organization(s) (e.g. IAEA (INPRO)) after initial bilateral work on the criteria of safety, environmental sustainability and proliferation resistance of diverse types of small and medium reactors—with a team of Generation IV specialists invited. 2. Prepare a comment from NIKIET on the terms of reference received for irradiation experiments from the U.S. side, the possibility to carry out the experiment, and conclusion of an appropriate contract.
May - August 2007 *NOTE: Workshops A, B, C, and D are proposed to be held concurrently*	1. Conduct Workshops on: A: Monitoring, Accounting, & Control Technologies, B: Fast Reactors - Cost reduction and Efficiency, C: International Nuclear Fuel Services including developing a methodology for establishing international nuclear fuel cycle services, in particular on the basis of the International Uranium Enrichment Center being created in Angarsk, D: Advanced Spent Fuel Processing & Waste Management including technological flow charts for diverse spent nuclear fuel processing and tritium recovery and sequestration in waste processing. 2. Common Vision subgroup prepares a presentation on the future global nuclear energy system—to be delivered at the next IAEA General Conference – subject to approval by both countries.
September 2007	1. Transuranic Fuel sub-group holds review meeting to discuss preliminary results of implementation of the experimental program, write draft report summarizing activities, progress, and accomplishments to date.

	2. Presentation of the Common Vision of the future global nuclear energy system during the IAEA General Conference – subject to approval of both countries.
October 2007	1. Working Group Program Review meeting summarizing accomplishments and deliverables. 2. Development of initial 2008 milestones.
November 2007	1. Prepare 2007 Working Group Report, obtain approval to finalize as required. 2. Finalize 2008 milestones.

GAO Lashes U.S. Nonproliferation Program

By Jon Fox
Global Security Newswire
Monday, January 14, 2008

WASHINGTON * A U.S. program intended to keep Russian weapons scientists employed and prevent them from selling information or assistance to other nations has directed significant amounts of money to scientists not claiming to have weapons-related experience, the Government Accountability Office reported Friday (see GSN, Nov. 6, 2006).

Also, about 15 percent of the scientists involved in the cases GAO auditors looked at were born in 1970 or later, making them too young to have had a hand in Soviet-era WMD efforts.

This is contrary to the original intent of the program, which was to reduce the proliferation risk posed by Soviet-era weapons scientist, government auditors wrote.

Following the collapse of the Soviet Union in 1991, there was a growing concern that indigent but experienced former Soviet scientists could spread the knowledge necessary for nuclear, chemical or biological weapons programs.

To mitigate potential proliferation risks, the Energy Department in 1994 established the Initiatives for Proliferation Prevention to engage former Soviet scientists in nonmilitary work in the short term and in the longer term create sustainable private sector employment.

More than a decade later, however, the GAO report calls for the Energy Department to seriously re-evaluate the program and come up with a strategy to discontinue the efforts.

DOE has not developed an exit strategy for the IPP program, even though officials from the Russian government, Russian and Ukrainian institutes, and U.S. companies raised questions about the continuing need for the program, government auditors write.

One senior Russian atomic official told GAO investigators that his nation*s reinvigorated economy has pushed the program into irrelevance and that scientists there no longer pose a proliferation risk.

In fiscal 2007, Congress appropriated $28 million for the program. *Due to the serious nature of these finding, we recommend that DOE perform a comprehensive reassessment of the IPP program to help Congress determine whether to continue to fund the program,* auditors wrote.

While agreeing with a number of the GAO recommendations, such as the call for more rigorous documentation to establish scientists* WMD background and better ways to measure the number of private sector jobs created, the Energy Department*s National Nuclear Security Administration disagreed with the report*s overall conclusion.

The administration, which oversees the programs, disputes the final GAO recommendation that the necessity of the program be reassessed, its associate administrator wrote in a letter drafted in response to the report.

As of April 2007, the Energy Department claimed to have engaged nearly 17,000 scientists in Russia and other countries, but the Government Accountability Office report points out that this includes both those with and without weapons-related experience.

In its analysis of 97 IPP projects involving roughly 6,500 scientists, auditors concluded that more than half did not claim to have any specific weapons-related background. Those scientists received 40 percent, or about $10 million, of funding for those projects.

Officials from 10 Russian and Ukrainian scientific institutes said the U.S. funding helps them attract and retain younger scientists who would have otherwise emigrated to the United States or western European nations, the Government Accountability Office reported.

Representative John Dingell (D-Mich.), chairman of the House Energy and Commerce Committee, told the Associated Press that the *GAO has raised troubling questions about whether a nonproliferation program has perversely funded a younger generation of (Russian) weapons scientists.*

The Energy Department claims to have created more than 2,700 long-term private sector jobs, but those accomplishments also have been overstated, government auditors concluded. The figure is uncertain because the agency relies on *good-faith reporting form U.S. industry partners and foreign institutes* and does not independently verify the numbers, the report says.

GAO officials also found that 97 percent of the funds being spent on nonproliferation projects in Libya through May 2007 were actually being spent in domestic DOE laboratories to pay for project management and oversight. Statutory restrictions on the program limit the percentage of such spending to no more than 35 percent.

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01/17/2008 11:19 AM
Johnson's Russia List
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17 January 2008
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A World Security Institute Project
www.worldsecurityinstitute.org
JRL homepage: www.cdi.org/russia/johnson
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#40
US Plans To Close Aid Program for Scientists Over Funds Misuse Reported

Nezavisimaya Gazeta
January 15, 2008
Unattributed editorial: "Assistance from the United States Arrived to Wrong Scientists. Washington Is Ready To Turn Its Back On Russian Closed Towns"

The main budget control administration of the U.S. Congress has detected serious violations in a program of assistance, active since 1991, for nuclear scientists and biologists who used to be involved in the development of weapons of mass destruction in the USSR. The U.S. Department of Energy has been asked to consider ways of quitting this project, on which millions of dollars have been spent.

The matter concerns mainly the nuclear scientists and biologists living and working in 10 closed towns in Russia (as well as scientists from Ukraine). In the early 1990's, life in those towns almost came to a halt due to underfinancing problems and Americans quickly figured that the highly qualified specialists left without means of subsistence might be hired by countries that secretly create weapons of mass destruction or even might themselves offer secret technologies to terrorists. This is how the aforementioned "nonproliferation initiative" was born.

Meanwhile, the program, which proved quite relevant, has not been carried out appropriately. Its funds have not always been spent on initially planned goals, and not effectively at that. A probe conducted by the U.S. counterpart of the Russian Comptroller's Office showed that the data, published by the U.S. Department of Energy, on the work conducted as part of the program, such as assistance provided to 16,700 scientists and creation of 2,790 new permanent jobs, is far from the true state of affairs.

Specifically, an inspection of a part of this program covering 97 projects revealed that more than half of the 6,450 scientists involved in the projects were born in 1970 and later and had no working experience in the sphere of developing nuclear, chemical, or biological weapons. This was allegedly admitted also by the leaders of Russian and Ukrainian institutes, who declared that the grants helped them attract and keep at work young scientists, who would otherwise have emigrated to the United States or other Western countries.

Experts from the Congress controlling body propose that the Department of Energy conduct a comprehensive scrutiny of the "nonproliferation initiative" and, while following in the footsteps of the State Department, which closed a similar program, plan methods of backing out of the existing projects.

BOTh usefulness of the above program for Russia and problems with its performance are obvious. It appears that the most important reason for this is the insufficient transparency of the projects. Their implementation was reassigned to bureaucrats, who clearly handled the funds at their own discretion. A similar problem was observed also in the Nunn-Lugar program of measures legislatively approved by the U.S. Congress and aimed at ensuring secure dismantling and storage of nuclear ammunition in Russia.

It is no secret that the lack of confidence that the appropriations are actually spent on goals determined by the law undermines the readiness of a donor country to continue its assistance. Meanwhile, Nunn-Lugar is the most significant program of assistance for Russia. It should be noted that the total assistance for Russia in this sphere promised by G8 was estimated at $20 billion.

But the problem is not only about big figures but also about the specific substance: Russia receives technologies it cannot use to ensure its own security. This may be the most significant factor of assistance programs. Recently, Moscow additionally demonstrated to U.S. specialists one of the facilities where equipment received from the United States as part of the Nunn-Lugar program was installed. It seems that this movement toward transparency should be continued in the name of international mutual understanding and ensuring security of Russia.

ROBERT ROBINSON, RESPONSES TO QUESTIONS FROM HON. GENE GREEN

1. Your study finds that 15% of the scientists hired in the 97 projects reviewed by GAO were born after 1970 and therefore unlikely to have participated in Soviet-era WMD programs. Why does GAO believe this may actually increase proliferation risk? Has any analysis been performed to determine the proliferation risk posed by younger scientists?

As we noted in our December 2007 report, officials at 10 of the 22 Russian and Ukrainian institutes we interviewed said that IPP program funds have allowed their institutes to recruit, hire, and retain younger scientists. DOE guidance for the IPP program does not specifically prohibit participation of younger scientists in IPP projects, but DOE has not clearly stated the proliferation risk posed by younger scientists and the extent to which they should be a focus of the IPP program. We believe that DOE has a mistaken and naive impression of how institutes in the former Soviet Union view the benefits of allowing younger scientists to participate in the IPP program. DOE's practice of allowing younger scientists to participate in the IPP program has the unintended consequence of allowing former Soviet Union institutes to use the IPP program as a long-term recruitment tool and, thereby, may perpetuate the proliferation risks posed by scientists at these institutes. In our view, this is a very troubling issue that DOE needs to address as part of a fundamental reassessment of the IPP program.

We are not aware of any analysis done by DOE to assess the proliferation risks posed by younger scientists.

2. Does the IPP program operate under any strategic plan that understands the threat of WMD knowledge leakage, the final goal of these programs and the strategy used to reach these goals?

In recent years, DOE has conducted strategic reviews and developed action plans for the IPP program, and has commissioned studies to help it better understand the threat of WMD expertise proliferation. However, we found that these efforts have not produced a more up-to-date and appropriate set of long-term goals and metrics for the program. For instance, we found that the IPP program's long-term performance targets do not accurately reflect the current size and nature of the threat the program is intended to address because DOE bases the program's performance measures on a 1991 assessment of the size of the former Soviet WMD scientific community. Moreover, the current program metrics - the total number of weapons scientists supported by IPP grants or employed in private sector jobs - are broad measures of program progress, but are not complete or meaningful indicators of program progress in reducing WMD expertise proliferation concerns within specific countries and institutes.

DOE acknowledged these weaknesses in the IPP program strategy, metrics, and goals. As a result, we recommended in our December 2007 report that the Secretary of Energy, working with the Administrator of the National Nuclear Security Administration, conduct a reassessment of the IPP program that, among other things, includes (1) a thorough analysis of the proliferation risk posed by weapons scientists in Russia and other countries, (2) a well-defined strategy to more effectively target the scientists and institutes of highest proliferation concern, and (3) more accurate reporting of program accomplishments.

3. In your testimony, you often mention the Department of State's strategy to ″graduate″ certain institutes from its programs and that DOE has not developed its own criteria to determine when participants ″graduate″ from the IPP program. Do you feel State's ″graduation″ strategy is sufficient to determine if scientists or institutes no longer require assistance, and should DOE use State's ″graduation″ strategy as a model for its own program?

We did not specifically take a position on the use of State's strategy as a model for DOE's development of an exit strategy. However, we believe that State's graduation strategy for its Science Centers program contains important elements that could serve as a baseline for DOE's development of a transition or graduation strategy for the IPP program. As we stated in our December 2007 report, State used a range of factors, such as the institute's ability to pay salaries regularly and to attract funding from other sources, when making determinations about the self-sustainability of institutes. DOE officials told us that they were aware of State's approach and had discussed it with State officials.

4. In your testimony, you state: ″DOE officials stated that the IPP program metrics are not sufficient to judge the program's progress in reducing proliferation risks. However, DOE has not updated its metrics or set prior-

ities for the program on the basis of a country-by-country and institute-by-institute evaluation of proliferation risk.″ After over a decade in existence, why do you believe the IPP program has not yet established adequate metrics or program priorities?

The specific reasons why DOE has not yet established adequate metrics or program priorities are unclear to us. However, in its written comments on our December 2007 report, DOE acknowledged ″the need to give greater consideration to.improving outdated metrics.″ It should be noted that in its Fiscal Year 2009 Congressional Budget Request, which was published in February 2008, DOE had still not updated its metrics for the IPP program to reflect an updated assessment of the size of the at-risk population of WMD scientists in the former Soviet Union. DOE's most recent congressional budget justification remains based on a 1991 National Academy of Sciences estimation of this population.

5. In your testimony, you state that ″the absence of a joint plan between DOE's IPP program and the International Science and Technology Center's Commercialization Support Program raises questions about the lack of coordination between these two U.S. government programs that share similar goals of finding peaceful commercial opportunities for foreign WMD scientists.″ Do these two commercialization programs overlap, and should they be consolidated or restructured in any way?

We did not assess the extent to which these two commercialization programs duplicate one another and offered no opinion on whether or not they should be consolidated or restructured. However, as we noted in our December 2007 report, DOE, State, and ISTC officials told us the IPP program and the Commercialization Support Program have a similar goal of finding commercial opportunities for weapons scientists in Russia and other countries of the former Soviet Union. According to ISTC officials, a key difference in the programs is that the Commercialization Support Program can support infrastructure upgrades at foreign institutes, but, unlike the IPP program, it is not used to support research and development activities. DOE and State officials stated that the programs are complementary, but acknowledged that they need to be better coordinated.

At the January 23, 2008 hearing, the Acting Deputy Assistant Secretary of State's International Security and Nonproliferation Bureau testified that ″aspects of commercialization are already in place at the ISTC via its commercialization program know called Innovation Initiatives (formerly the Commercialization Support Program) and at STCU through the Targeted Research Initiatives. For both these commercialization initiatives, State has worked with and drawn from the Department of Energy's own commercialization efforts in the Initiatives for Proliferation Prevention program.″ Both DOE and State concurred with our recommendation to more closely coordinate these programs.

Department of Energy
National Nuclear Security Administration
Washington, DC 20585

April 14, 2008

The Honorable Bart Stupak
Chairman
Subcommittee on Oversight and Investigations
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

On January 23, 2008, Adam Scheinman, Assistant Deputy Administrator, Office of Nonproliferation and International Security, National Nuclear Security Administration, testified regarding the effectiveness of the Department of Energy's Initiatives for Proliferation Prevention Program (IPP).

Enclosed are the answers to questions for the hearing record.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Renee Wilhite, on (202) 586-7597.

Sincerely,

David A. Campbell
Director
Office of Congressional, Intergovernmental
and Public Affairs

Enclosures

Printed with soy ink on recycled paper

QUESTIONS FROM CHAIRMAN DINGELL

Global Initiatives for Proliferation Prevention

Q1. Have any Russian institutes that are funded by the Department of Energy's (DOE) IPP program conducted work on Iranian nuclear projects between 1994 and 2008?

Please list the names of Russian institutes, the projects that have been funded under IPP at such institutes, the amount of funding, and the years such projects were funded. Please provide these answers in a non-classified form.

A1. To ensure completeness and accuracy, we have undertaken to search a large volume of project and payment records and intelligence information. The Department has now compiled such a list and has provided it to appropriately cleared individuals. To put this information in context, we also provided a classified briefing to such individuals.

QUESTIONS FROM CHAIRMAN DINGELL

Q2. Have any Russian institutes that are funded by DOE's IPP program conducted work on nuclear projects in North Korea or Syria between 1994 and 2008, or in Libya between 1994 and 2004? Please list the names of the Russian institutes, the projects that have been funded under IPP at such institutes, the amount of funding and the years such projects were funded. Please provide these answers in a non-classified form.

A2. Again, to ensure completeness and accuracy, we have undertaken to search through a large volume of records and intelligence information. At this time, it is not possible to provide an unclassified answer. However, we would be pleased to provide information and, for context, a classified briefing to appropriately cleared individuals.

QUESTIONS FROM REPRESENTATIVE STUPAK

Global Initiatives for Proliferation Prevention

Q1. You testified that: "The threat of scientific migration is not one that gives us the greatest concern today." If that is the case, is there a point where the Department of Energy's (DOE) work in this area should be redirected to higher priorities to other countries of other non-proliferation programs? Where is that point?

A1. Former WMD scientist migration from Russia does not give us the greatest concern today; however, my statement in testimony posited that lower risks should not be equated with an absence of risk. Further, my statement indicated that as long as proliferation demand persists, former WMD scientist engagement can play a role in preventing the proliferation of weapons of mass destruction. That said, consistent with the changed proliferation environment and economic recovery in Russia, it should be noted that GIPP has steadily reduced funding in Russia over the last five years, has eliminated the Russian-focused Nuclear Cities Initiative leg of the program, and has undertaken projects in Iraq and Libya, where risks of scientist recruitment are higher. In addition, GIPP has completed the initial phases of an institute risk assessment, which should allow for more precise targeting of programs and funds.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q2. The Government Accountability Office (GAO) found that IPP program funding helps Russian institutes attract, recruit, and retain young scientists who never worked on Soviet-era WMD programs, which was a way to keep the institutes operating.

(a) Do you agree with the GAO testimony, which contends that this is contrary to the original intent of the program, that is, to reduce the proliferation risk posed by Soviet-era scientists?

A2(a). We do not agree with the GAO on this point. GIPP primarily funds projects involving former Soviet facilities that have lost their WMD function and funding and are making the transition to civilian work. One indicator of successful transition is the ability of such institutes to hire new staff.

Q2(b). What is an acceptable level of younger scientists to include in IPP projects?

A2(b) GIPP has not sought to develop this type of measure. What the program said to the GAO during the course of its recent audit was that the number of non-former WMD participants--regardless of age--should be minimal and only at the level needed to ensure that projects involving a U.S. industry partner will succeed. GIPP projects should involve a preponderance of former WMD scientist participants. GIPP accepts that guidance on this point should be updated and the program will endeavor to do so.

Q2(c). Why should the U.S. Government fund projects in Russia and other former Soviet Union countries that are used by foreign institutes to attract, recruit, and hire younger scientists? Does this make sense given the original intent of the program?

A2(c) As noted above, GIPP primarily funds projects at institutes that have lost their WMD function and funding and are making the transition to civilian work. To the extent that such institutes are making a successful transition from their former WMD work and are

pursuing projects having commercial potential, it is realistic to expect they would be able to make new hires, based on a civilian mission. That said, GIPP will consider this concern as part of its effort to implement an appropriate exit strategy.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q3. Is it your opinion that the IPP program is currently targeting its resources in the former Soviet Union to gain the maximum non-proliferation benefit per dollar spent on this program? What metrics are you using to quantify and benchmark this performance?

A3. We believe that GIPP is targeting resources to maximize nonproliferation benefit. Our metrics involve numbers of former weapons scientists engaged. To ensure the program targets higher risk institutes, we recently completed the first phase of a comprehensive institute risk assessment that draws on the informed judgment of National Lab experts and available data. GIPP plans to use the results of this assessment to set priorities for allocation of funds more precisely and to more accurately reflect program accomplishments. The assessment will also help refine and update the program metrics, a process which we plan to complete over the next few months.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q4. Do you agree that DOE has overstated the number of jobs?

A4. GIPP believes that emphasis on job creation numbers is misplaced. The methods used to compile such numbers have included input and significant effort from the United States Industry Coalition (USIC); surveys of Russian and the Former Soviet Union (FSU) institutes undertaken by the National Industry Coalition, a USIC subcontractor based in Moscow; and review by GIPP and National Lab staff familiar with the projects. It should be noted, however, that U.S. industry partners and Russian institutes are under no obligation to provide this information as it usually involves jobs created or supported after the end of a project and therefore no longer involves U.S. Government funding. For this reason, GIPP recognizes that job creation is not a reliable metric and further refinement of our program metrics is needed.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q5. Can the job creation numbers used by DOE in its FY2009 budget request (5,000 sustainable civilian jobs) for the IPP program be relied upon as an accurate measure of performance? Does DOE plan to amend its budget justification to reflect a more credible number?

A5. As indicated in the responses above, GIPP recognizes that creation of "sustainable civilian jobs" is a beneficial result but may be beyond the program's mandate or ability to control. For that reason, we are undertaking to refine our metrics, considering perhaps institutes rather than individuals engaged or jobs created. If it is too late to include the new metric in the 2009 budget implementation plan, then the change will be reflected in 2010.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q6. Has DOE quantified the number of Russian institutes that are not economically self-sufficient, and for which there are Soviet-era weapons scientists who are unemployed or underemployed?

A6. We are getting there. GIPP recently concluded the first iteration of an extensive institute risk assessment. Factors considered in this assessment include, *inter alia*, economic and security conditions, location, and levels of specialized expertise and numbers of experts. The assessment ranks institutes with former Soviet WMD scientists from high to low risk. Our program goal in coming years will be to target GIPP resources by engaging only those institutes that pose higher risk. At this stage of the review, we conclude that there are at least 50 institutes that fall on the higher end of the risk spectrum; GIPP has 59 projects underway at about 20 of these institutes. Once the universe of institutes is more fully reviewed by our experts, a process we hope to complete later this year, we expect to see a higher total of institutes rating as high-risk.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q7. When was the assessment referenced in Question 4 performed? In 2008?

A7. The institute assessment was initiated in fiscal year 2006. An initial draft was briefed to the GIPP community in May 2006; with phase one of the assessment having been finalized in January 2008.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q8. Is DOE continuing to rely upon the 2002 survey by Deborah Ball to assess brain drain proliferation risk?

A8. The Department does not rely on the Deborah Ball study or any other single source.

The most relevant data is obtained from on the ground experience and interagency

working groups that meet regularly to discuss issues pertinent to the program.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q9. How many institutes are there in the former Soviet Union that are not economically able to pay its WMD scientists, leaving them unemployed or underemployed? How many WMD scientists are in such an economic situation where they pose a brain drain risk?

A9. The GIPP institute assessment referenced above considers unemployment and unpaid salaries at WMD institutes among other factors in rating risk. While we do not have reliable information regarding the economic circumstances of individual former weapon scientists or the WMD expert population writ large, we are in a better position to judge conditions across facilities. This will help refine priorities and metrics and better target funds in conditions where the risk is no longer characterized by mass scientist migration to countries of concern.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q10. What is the DOE's long term goal for this program? Does DOE still plan on engaging 17,000 scientists by 2015? Does it still plan on funding projects to support 11,000 private sector jobs for Russia scientists by 2019?

A10. Our long-term goal is to remain engaged with former WMD scientists where the risks of recruitment for purposes of proliferation remain. Where those risks do not remain, we will seek to wind down and end engagement. Our immediate goal is to implement the program and management recommendations contained in the GAO recommendations and the program's internal assessment conducted in 2006, and consider farther reaching adjustments to the program, as appropriate.

Long-term program projections are to be reassessed using a facility-based risk analysis. This analysis is integral to GIPP's revision of program metrics, a process now underway. Assuming the revision is approved, our intention is to design a metric that is not specific to numbers of jobs created or scientists engaged, and is instead specific to targeted facilities.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q11. Does DOE have evidence of a single scientist it has supported who has not migrated to a country of proliferation concern or a terrorist group because of the funding provided through the IPP program? GAO indicates that DOE lacks such evidence.

A11. Thousands of former weapons scientists have been engaged through DOE and other USG programs in civilian projects, diverting time, resources, and expertise that might otherwise be available to support programs of proliferation concern. The programs have provided added benefits, including access, transparency and the establishment of communities of former WMD scientists working with us to prevent proliferation. The mass migration of former weapons scientists to countries of proliferation concern has not materialized. Many factors likely have contributed to this result, and we believe the positive role played by scientist engagement programs has been one of those factors.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q12. A 2005 Rand Study sponsored by the DOE indicates that for every dollar increase in a barrel of oil, the Russian government increases its tax collections by $1 billion per year. Oil has jumped from about $50 per barrel to around $93 per barrel. GAO points out that Russia has a $113 billion stabilization fund, and its foreign debt has dropped from 96 percent GDP to only 6 percent of GDP. Some of this prosperity is making its way to closed nuclear cities and scientific institutes, according to Rand.

Do you concur with the Rand Study that funding has started to make its way into former WMD institutes? Or are there major pockets of hardship that need to be urgently addressed, and which institutes fall into that category?

A12. We do believe that as a general matter former Soviet weapons institutes are better off today than in the past. However, economic recovery has been uneven or unseen in former Soviet states other than Russia. Uneven distribution of wealth at institutes is an observed fact by GIPP program officials and National Lab experts. Given changed conditions, the GIPP institute assessment referenced above is intended to distinguish among institutes, target our resources, and set priorities. With respect to institutes that continue to endure hardship, we consider economic conditions as a key analytical factor.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q13. Your testimony stated, "The absence of high migration risk does imply, however, that the manner in which GIPP has been traditionally carried out merits some recalibration."

(a) What specific recalibration has taken place?

A13(a) A number of steps have been taken, with others planned. In terms of budget, we have dropped from $57 million in 2002 to about $30 million in fiscal year 2008. Our 2009 request is about $24 million. The Nuclear Cities Initiative was cancelled in 2006, and allocations for projects in Russia have decreased from about $40 million in fiscal year 2002 to about $8 million in fiscal year 2008. The latter figure may change, depending on program decisions this year. The program will also pursue cost-sharing with Russia for new projects and is currently implementing the institute assessment referenced above that is intended to further target our resources and set priorities. Finally, the program has allocated resources to projects involving former weapons scientists in Iraq and Libya.

Q13(b)Testimony indicated that DOE does not agree with GAO's recommendations that DOE should reassess its program, particularly in view of changing economic conditions in Russia. Please explain.

A13(b)The reason we disagreed with the GAO recommendation to reassess the program was that such a review was conducted by the program in 2006, at the request of the NNSA Administrator. Nevertheless, due to concerns raised by members of this Committee, the Department has decided to take another comprehensive look at all aspects of GIPP, drawing on our 2006 internal assessment, the GAO report, and consultations with Congress, the State Department, and other stakeholders.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q14. Isn't it the case that the Department of State has established criteria and is graduating institutes as they become self-sustaining? Why isn't DOE following the same path, and formulating an exit strategy on an institute-by-institute basis, as well as on a country-by-country analysis?

A14. The Energy and State Department approaches to scientist engagement do not precisely mirror each other, but are coordinated and complementary. State, for example, among institutes that vary in their progress toward becoming self-sustainable, targets institutes that are close to self-sustainability. Energy tends to focus on those having a longer way to go. Further, in identifying institutes for graduation, State considers whether alternate, non-Science Center, funding sources are available, including GIPP projects that have a U.S. industry partner. Both State and Energy agree that institute graduation does not preclude either agency from working at institutes that continue to face important proliferation risks, and that institute self-sustainability should not be equated with absence of proliferation risk.

As recommended by the GAO, GIPP plans to develop an exit strategy, and will draw on the institute assessment referenced above for this purpose. This strategy will help reduce and eliminate funding at institutes where proliferation risks are deemed to be low.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q15. A Russian Atomic Energy Agency official told GAO that the IPP program is no longer relevant because the Russian economy is strong and its scientists no longer pose a proliferation risk?

(a) Does this Russian government official fairly represent his agency's views, in your opinion? Is this also the view of the Russian government at-large?

A15(a) No. Three GIPP officials at the meeting in question understood the Russian official to state that he was addressing all cooperative threat reduction programs, and not solely GIPP. A second Russian government official at this meeting spoke positively about the GIPP program, a point not reflected in the GAO report.

Q15(b) Do you agree with this official's assessment of proliferation risks from Russian institutes at this point in time?

A15(b) As noted above, we understand that conditions in Russia have changed. Some institutes are better off economically than others, but economic conditions are not the sole measure of risk. Further, there are more than 200 former WMD institutes in Russia, and each is dealing with different circumstances. The institute assessment referenced above is an attempt to make meaningful distinctions for the purpose of targeting resources and setting priorities so that nonproliferation goals are met.

Q15(c).Hypothetically, if this program were phased out over the next 12 months, could you quantify the increased risk of scientists selling their services to a rogue state or a terrorist?

A15(c) Quantifying risk in scientist engagement programs is extremely difficult; for similar reasons, proving the syllogism that GIPP support prevents former WMD scientists from migrating to countries of concern, or that absence of GIPP support encourages such migration, is equally difficult to quantify. What we can say is that the program is

premised on engagement of former weapons scientists who by definition have less time and motivation to support proliferation programs. The corollary is that the abrupt withdrawal of GIPP support could increase risk. We do not assert that as an absolute proposition, and indeed the program has begun to undertake a priority-setting exercise and to pursue cost-sharing arrangements given changed conditions in Russia and other parts of the former Soviet Union.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q16. GAO recommends that DOE shift this program into a cooperative effort in which the U.S. and Russia are jointly funding scientific projects, as opposed to the direct assistance model now in place today. Do you agree? How many projects are being shifted to a cooperative funding model outside of GNEP?

A16. The Department agrees with the GAO's recommendation. We do not yet have a precise number, but our target is to seek Russian cost-sharing for new projects and to consider options for introducing cost-sharing to some number of existing ones as well.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q17. DOE's Nuclear Cities Initiative, which involved creating sustainable economic alternatives for workers displaced inside Russia's closed nuclear cities, was terminated in September 2006. DOE told Congress that due "to improving conditions in the Russian economy and Russia's ability to render technical assistance to its closed cities on its own, Russia and the US decided not to renew the government-to-government agreement for this program."
Why doesn't the same logic for phasing out the Nuclear Cities Initiative also apply to the IPP program? What is different?

A17. The United States and Russia agreed that there was no need for the Nuclear Cities Initiative (NCI), and as a result NCI was discontinued with a small number of projects in the closed cities shifting to IPP. Improved budgets of weapons institutes inside the closed cities certainly played a role in this decision, as did our view that NCI had met its requirement of helping to establish sustainable enterprises to the point where U.S. Government support could stop. The majority of IPP projects are conducted outside of closed cities, in locations where Russian Government funding is often less reliable or even non-existent.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q18. Please itemize all projects that have been approved by the IPP program in the former Soviet Union that are related to the Global Nuclear Energy Partnership (GNEP). Please indicate which projects are active, the purpose of the project, the country, and the amount of funding provided by the U.S. and the partner country, and the source of funds from within DOE (e.g., IPP, NE, Energy Research).

A18. Listed below are GIPP scientist engagement projects previously approved for implementation in partnership with Russia to advance nuclear energy and nonproliferation objectives, including advanced fuel cycle efforts and strengthened international safeguards. Each is followed by a brief description. The project cost and funding source for each is indicated. Only project #4 noted below is underway. The other projects are either in development, awaiting final agreement by the parties (i.e., the International Science and Technology Center and the U.S. national laboratory and Russian participants), or have been placed on hold (specifically #1-2). Projects that may involve export-controlled information or technology (#1-3 below) were structured so that the technology flow is from Russia to the United States.

Projects approved in FY 2007

1. Modified TRUEX and TALSPEAK Processes: advances improved separation processes for spent nuclear fuel combining solvent extraction and ion exchange. $880,000
    a. *Funding source: GIPP (Russian and partial U.S. costs for national laboratory oversight) $580,00 DOE Office of Nuclear Energy (contributes to U.S. costs for national laboratory oversight) $300,000*
    b. *Project structured so that export-controlled information or technology flows from Russia to the United States*

2. Diamide Derivatives of Dipicolinic Acid in Polar Diluents as Actinide and Lanthanide Extractants: advances proliferation resistant technology by reducing need to neutralize acid solvents, which streamlines separation process and controls loss of special nuclear material. $843,000

a. *Funding source: GIPP (Russian and partial U.S. costs for national laboratory oversight), $543,000; DOE Office of Nuclear Energy (contributes to U.S. costs for national laboratory oversight) $300,000*
b. *Project structured so that export-controlled information or technology flows from Russia to the United States*

3. Production of TRU-containing oxide fuel pins/targets for transmutation in the BOR-60 fast reactor: focuses on increasing consumption of transuranic elements (including long-lived plutonium) in advanced burner reactors, potentially eliminating need to dispose of transuranics in a geologic repository. $880,000
    a. *Funding Source: GIPP*
    b. *Project structured so that export-controlled information or technology flows from Russia to the United States*

4. Actinide Nano-particles Environmental Behavior Relevant to Safe Disposal of Spent Nuclear Fuel and High Level Waste in Advanced Nuclear Fuel Cycle: provides understanding of small-nano particles responsible for plutonium migration at production sites. $1,099,998
    a. *Funding Source: GIPP; seeking contribution for U.S. costs from Office of Science*
    b. *Project does not involve export-controlled information or technology*

5. Solidification technologies for radioactive and chemical liquid waste treatment: uses polymer technology to solidify radiation liquids and sludges in blocks for easier accountability. $729,000.
    a. *Funding Source: GIPP; Nochar, Inc. Pacific Nuclear Solutions (U.S. Industry Partner)*
    b. *Project does not involve export-controlled information or technology*

<u>Projects approved in FY 2008</u>

6. Advanced Safeguards for Uranium Enrichment Facilities: assesses possibilities for applying new safeguards measures at enrichment plants and prepares a test plan for application of those technologies, possibly using the Angarsk international enrichment center as a test-bed. $500,000
    a. *Funding Source: GIPP*
    b. *Project does not involve export-controlled information or technology*

7. Enhancing Safeguards in Reprocessing Facilities: identifies and prioritizes advanced technology for safeguarding nuclear fuel reprocessing facilities, and prepares preliminary test plans for future technology demonstrations at a Russian facility. $500,000
    a. *Funding Source: GIPP*
    b. *Project does not involve export-controlled information or technology*

QUESTIONS FROM REPRESENTATIVE STUPAK

Q19. Why should the U.S. continue to fund two "brain drain" programs (DOE and the Department of State) with similar goals and objectives to support former Soviet Union WMD scientists?

A19. The State and Energy Department programs are both funded at modest levels, and commensurate with the proliferation threat. Our efforts are coordinated and complementary, as described above in Q#14.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q20. Five of 14 company officials in the IPP program reported to the GAO that due to Russia's increased economic prosperity, the IPP program is no longer relevant as a nonproliferation program in Russia. Given that these company representatives were effectively arguing against government grants that could aid their businesses, doesn't this suggest there is a reason to reassess whether the DOE's resources are appropriately targeted?

A20. We cannot speak for the individuals referenced here. As a general matter, we firmly believe that U.S. industry partners see value in the program, or they would not participate. It is important to note that GIPP does not provide government grants to U.S. businesses; the businesses match GIPP funding or provide "in-kind" services on a matching basis.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q21. Why wasn't the IPP program set up on a government-to-government basis?

A21. Because scientist engagement involves multiple governments, agencies and institutes, the United States and its partners agreed to work under existing multilateral agreements that established the International Science and Technology Center in Russia, the Science and Technology Center in Ukraine, and the Civilian Research and Development Foundation. It did not make sense to duplicate these established mechanisms, which have worked well to guarantee tax-free treatment for project funds, among other benefits.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q22. Please describe DOE's efforts in Iraq and Libya as part of IPP and the amount of funding it plans for these two countries in FY2009.

A22. GIPP-funded projects in Libya focus on water infrastructure (purification/desalination), establishment of a Center for Mechanical Industries, and other civilian science topics. Training sessions for Libyan scientific and technical personnel are also a priority. GIPP Libya funding: $2,000,000 in FY08.

With respect to work in Iraq, GIPP funds small-scale civilian projects, training, and workshops that contribute to reconstruction efforts. Topics include agriculture, material science, radiation safety, public health and water management. GIPP works closely with the Department of State and with a Middle East non-governmental organization in order to advance these objectives. GIPP Iraq funding: $2,000,000 in FY08.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q23. The NNSA recently announced the startup of the first new boiler and turbine of a fossil fuel power plant in Seversk under a U.S. program aimed at shutting down two plutonium-producing reactors and that also provided heat and light for this city. This project has taken more than a decade, and represents an important nonproliferation milestone. How much plutonium were these reactors producing each year? How has the costs of this project been funded? What is the U.S. share?

A23. The ADE-4 & ADE-5 reactors in the city of Seversk were producing approximately 400 kg of weapons grade plutonium per reactor per year. Following the entry of the reactors into an alternating mode of operation in December 2007, this amount has been reduced by 50%. The United States is funding the refurbishment of an existing fossil fuel facility in the city of Seversk. The U.S. share is capped at $285,000,000.

QUESTIONS FROM REPRESENTATIVE STUPAK

Q24. GAO audited 97 IPP projects and found that fewer than half of the scientists and engineers hired are Soviet-era WMD scientists – raising the question of whether DOE is misdirecting resources to the wrong group of people. You testified that DOE disagrees with that finding, and that the majority of the participants were former Soviet era WMD scientists.

(a) Please explain in detail precisely what evidence you have to show that GAO is in error.

A24(a). The GIPP program undertook an independent analysis on this question through its payment agents in the former Soviet republics - the ISTC, the STCU and CRDF. The information provided by these organizations indicates that a majority of GIPP project participants possess former WMD experience or expertise. GAO denied our request in September 2007 to identify those projects and payment records they had reviewed, so it was not possible for GIPP program officials to verify GAO's figures.

Q24(b).Was this additional information shared with GAO? Please explain.

A24(b). Yes, this information was included in the NNSA letter dated November 21, 2007, which transmitted the Department's formal response to the GAO draft report. The GAO final report was released on January 11, 2008. It also should be noted that the GAO report itself indicates that those GIPP projects selected for in-depth review were a judgmental sample that cannot be applied generally to the program as a whole and that the findings associated with them cannot be applied generally to the program as a whole.

QUESTIONS FROM REPRESENTATIVE GREEN

Global Initiatives for Proliferation Prevention

Q1. GAO found that more than half (54%) of the scientists paid by the IPP program never claimed to have WMD experience, according to a review of 97 projects involving 6,450 scientists. DOE's program guidance requires at least 60% of personnel funded by the IPP program must have been Soviet-era WMD scientists.

(a) Can you describe DOE's current method of verifying the WMD background of participating scientists, and why do you believe that there is a discrepancy between GAO's findings and DOE's claim that a "majority of project participants have WMD experience?"

A1(a). As detailed in the GAO report, GIPP project participants declare whether or not they possess weapons experience and specific expertise, such as nuclear weapons design, construction, or characteristics. These declarations are certified by the foreign institute director and the host government overseeing the institute. This is the same practice used by other USG scientist engagement programs.

In terms of the discrepancy with the GAO, as noted above, the Department was unable to assess the 97 projects reviewed by the GAO. Our oral requests for this information were denied by the GAO, and therefore we cannot comment on the accuracy of the GAO's findings. We have, however, worked with our payment agencies for all projects, and determined that the majority of program participants have WMD experience or expertise.

Q1(b) How do you respond to the GAO reports findings that "senior representatives at five national laboratories said they did not have sufficient time or the means to verify the credentials of the proposed project participants"? If the national labs do not have the time and the means to verify WMD backgrounds today, how will they have the time or

the means to perform the more rigorous background checks GAO is recommending in the future?

A1(b). We are concerned about the GAO's allegation and we are looking into the matter. We expect all U.S. participants to follow procedures outlined in the GIPP program guidance, which includes, among other things, that National Lab participants ensure that project proposals include the requirement that a majority of participants have WMD backgrounds. Grant recipients must further reflect their *bona fides* on their applications for participation through GIPP payment agencies. As for the latter part of the question, we concurred with GAO's recommendation that steps be taken to improve the documentation of our project review process, and we are working with our National Lab representatives to develop revised procedures.

QUESTIONS FROM REPRESENTATIVE GREEN

Q2. Do DOE officials check the WMD background of every individual in a project proposal or only certain scientists? Does DOE have a reliable sense of the proliferation risk that each individual poses in an IPP project?

A2. GIPP checks the WMD backgrounds of a representative sample of WMD personnel from each institute or department. Our reviews are based on informed judgments by USG scientific experts; assessments of open source reporting (e.g., publications); and declarations of each foreign participant certified by the associated institute and foreign government ministry. This is the same practice used by other USG scientist engagement programs. We also rely on record keeping at the International Science and Technology Center (ISTC) and other organizations that help implement our projects. As noted above, GIPP is undertaking to improve its documentation processes. For example, we are working with payment agencies (such as the ISTC) to ensure that records of participants are current, and we are implementing a new electronic system to improve tracking of participant *bona fides*.

QUESTIONS FROM REPRESENTATIVE GREEN

Q3. GAO states that "DOE has not updated its metrics or set priorities for the program on the basis of a country-by-country and institute-by-institute of proliferation risk." After over a decade in existence, why do you believe the IPP program has not yet established adequate metrics or program priorities to direct limited resources?

A3. The IPP program had a comprehensive list of performance metrics listed in its 1999 Program Strategy document. Some of these are metrics are still in use, and stem from the original authorizing legislation for the program (P.L. 103-87, Section 575). Over time and upon further assessment, some of these metrics were dropped, which reduced the metrics population in accordance with revisions to the program's guidance. In FY 2005, the program further refined its metrics in the course of the OMB PART process. Performance metrics are always subject to refinement in light of changing circumstances, and the program is currently undertaking such an effort.

QUESTIONS FROM REPRESENTATIVE GREEN

Q4. What percentage of the IPP program projects results in the commercialization of a product? Is the private sector establishing successful commercial ventures on its own with these foreign institutes and scientists? Could the IPP program learn any lessons or expand its commercialization tools based on the private sector's success?

A4. In recent years, over 17 percent of GIPP projects involving industry partners generated revenue from sales or services. Additionally about 20 percent of projects generated other commercial outcomes, such as cost-savings, investments, grants, patents, and clinical trials. This rate compares favorably with research carried out in Western laboratories and research centers. GIPP projects have also resulted in a number of ongoing ventures between industry partners and their counterparts from the former weapons institutes.

QUESTIONS FROM REPRESENTATIVE GREEN

Q5. According to your testimony, you state DOE plans to "produce a strategic plan that will better align the purpose and implementation of the program; and more effectively articulate an exit strategy." What do you envision your strategic plan will look like? What will your exit strategy look like?

A5. A strategic plan will have the purpose of refreshing our articulation of mission, goals, and objectives. Among those objectives is implementation of the GAO recommendations concerning implementation of the program. These include, for example, better documentation for project participants, development of streamlined financial processes, reducing uncosted balances, improved metrics, and better guidance on commercialization. The plan should also articulate an exit strategy that continues progress made over several years to decrease activity in Russia, as conditions permit and in line with our assessment of proliferation risk. More far reaching adjustments could also be imagined and we look forward to consulting with Congress and other stakeholders as our thinking evolves.

QUESTIONS FROM REPRESENTATIVE GREEN

Q6. Do you believe DOE should have sought congressional authorization before expanding its efforts beyond Russia and the former Soviet Union countries into Iraq and Libya? Do you feel expanding these efforts into other nations is wise before the IPP program has time to develop a new strategic plan and effective performance metrics?

A6. To be clear, GIPP's involvement in Iraq and Libya was not self-started; it was initiated at the request of the White House and State Department to address differing requirements. The work in Iraq was to engage scientists who might otherwise be tempted to sell their services to countries of concern or terrorists. The Libya work was identified as an early priority for engagement following the regime's decision to abandon its WMD programs. The total effort in both countries is quite modest in budget and scope. Further, we are confident that lessons learned in the Russia/FSU context, and the direction on metrics that already aim to pursue, will together position us well to work in these countries.

In terms of congressional authorization, it should be noted that our efforts in both countries have been briefed to our authorization and appropriation committees since 2005 as part of our annual budget cycle. No concerns were raised in this process, but we will nevertheless continue to consult with our committees to ensure there are no ambiguities in this regard.

RICHARD STRATFORD, RESPONSES TO QUESTIONS FROM HON. BART STUPAK

Question:

You testified that the Department of State plans to sunset funding for Russian institutes as part of its Science Centers programs by 2012. Why doesn't the State Department view its Science Centers program as a perpetual program? Aren't the risks from scientist "brain drain" to rogue nations an ongoing problem which would merit continued funding?

Answer:

State's Global Threat Reduction programs (GTR) are threat driven and worldwide. Thus, if State reaches 2012 and has graduated all the priority institutes on our Science Centers Program list, but there are still proliferation threats from FSU former WMD institutes or WMD experts, State will continue to engage scientists in the FSU. It may be the case that in 2012, the threat in the FSU may not still exist, and State would then use these funds to engage scientists at risk elsewhere; however, that is years away. For now, State plans to focus on engaging institutes that face the most important proliferation risks and to also focus on graduating institutes to financial self-sustainability.

Question:

What is the budget for FY2009 for the Science Centers Program?

Answer: The estimated budget for FY2008 is $12 million shared between the International Science and Technology Center (ISTC) and the Science and Technology Center in Ukraine (STCU). No decision has been made about how to allocate our Global Threat Reduction funds for FY2009 among the various program elements worldwide. Since CTR's programs are threat driven, we have been making 20% reductions to the Science Centers Program budget on average per year, and this may help estimating the budget for Science Center spending for FY2009.

Question:

What criteria does the Department of State use in selecting and graduating institutes from the program?

Answer:

Institutes are selected to be on the priority list for graduation based on an interagency review process. We started our graduation process with a list of 200 institutes which we believe need to become financially self-sustainable in order to decrease proliferation risk associated with financial instability. The U.S. considers and balances a variety of factors relating to an institute's potential for financial self-sustainability. Examples of the types of factors utilized by the U.S. in making a determination about where an institute should fall in the graduation continuum are:

•Ability to secure grant funding from international, non-Science Centers sources,

•Possession of equipment/training/international certifications required to secure outside funding or, alternatively, the ability to meet such requirements through short-term, intensive training or equipment provision,

•Staff ability to write competitive grant proposals for international funding bodies,

•Ability to publish in international scientific journals,

•Ability to develop a financial plan for long-term sustainability,

•Ability to pay staff salaries regularly from host Government or outside (non-Science Centers) funding sources,

•Capability of leveraging current or past Science Centers funding to increase host Government interest and investment in the institute,

•Ability of institute to provide international access and conduct business in an open, transparent manner,

•Ability to engage in contract research and/or commercial production (Note: For many research institutes in the former Soviet Union, the Department of State does not expect commercial success to be the most viable self-sustainability solution.),

•Understanding of intellectual property concerns/requirements,

•Designation of staff to handle intellectual property issues for the institute as appropriate,

•Number of international patents/capability of filing records of invention.

Additional factors that may be taken into account when determining an institute's graduation status:

•Number of former weapons experts still employed at the institute,

•Security/location of materials at an institute that could be vulnerable to rogue state/terrorist use,

•Proximity of an institute to a region with terrorist activity.

Once an institute has been identified as a candidate for graduation, more targeted assistance can then be provided to help the institute to meet one or more final objec-

tives to enhance self-sustainability and eliminate the need for U.S. regular project funding. The U.S. believes that the Science Centers and ISTC/STCU Parties can be instrumental in providing this targeted assistance. The U.S. has also found that capabilities assessments can be helpful as the first step in institute discussions about self-sustainability planning as a prelude to graduation.

Question:

If an institute becomes financially self-sufficient, but continues to represent a proliferation concern, will the Department of State ″graduate″ this institute under its criteria?

Answer:

State continues to engage institutes that face the most important proliferation risks, regardless of their graduation status because residual risk may exist despite financial self-sustainability.

Question:

Why should the U.S. continue to fund two ″brain drain″ programs (Departments of State and Energy) with similar goals and objectives to support weapons of mass destruction scientists who were employed by the former Soviet Union?

Answer:

The Science Centers Program and Initiatives for Proliferation Prevention Program (IPP) are complementary. Under the Science Centers Program, State acts as the U.S. representative in the two international centers in the FSU. State's programs focus on graduation and science projects and are part of our fast-paced and extensive worldwide effort to engage WMD scientists. State also funds initiatives at the Centers such as Counterterrorism workshops, business training, science advisory council meetings, communication support, etc., to redirect scientists to peaceful, sustainable civilian employment. From our perspective, IPP offers unique commercialization opportunities with U.S. private industry and national laboratory partners. When the programs were created, agencies viewed the Science Centers Program and DOE's IPP Program as complementary and supplemental.

Question:

In terms of the Department of State's involvement in scientist assistance programs in Iraq and Libya, what are the key differences between the approaches used by the Department of State and the Department of Energy (DOE)?

Answer:

State's Iraq Redirection Program and the Libya Scientist Engagement Program are aimed at redirecting former WMD personnel and those with WMD-related expertise in these countries to peaceful, civilian activities. The Department of State has the lead for diplomatic and policy guidance on engaging WMD specialists in Iraq and Libya.

In State's redirection program in Iraq, we run our own science organization in the Red Zone, parts of Baghdad outside the International Zone perimeter, and also work to facilitate employment matchmaking, carry out business development and project management training, and support conferences and technical programs. DOE does not have its own science organization to carry out its work in Iraq. Rather, it partners with an independent regional organization that has a Baghdad branch office to provide technical scientific training and research opportunities to Iraqis.

State efforts are coordinated with IPP through regular meetings and correspondence, participation in weekly Iraq Redirection Program-wide telecons, having IPP representation at CTR-sponsored proposal review meetings, and through coordination on strategic planning and upcoming events to ensure effective and united USG policy formulation and implementation.

In Libya, following its historic decision to dismantle its WMD programs, Western assistance was requested in engaging Libyan WMD scientists. The Libya Scientist Engagement Program responds to this request by redirecting former WMD scientists toward civilian careers that can enhance Libya's economic development. The UK and DOE are partners in these efforts.

State works very closely with DOE which focuses primarily on nuclear scientists in Libya, and we engage the entire population of nuclear, biological, chemical, and delivery systems experts. Efforts in Libya are highly integrated and we rely on DOE's technical expertise while we address the broader threat.

Question:

What is the Department of State's view about the Government Accountability Office's (GAO) finding that the Department of Energy is currently funding 35 projects at 17 Russian and Ukrainian institutes that the Department of State considers to have ″graduated″ from its program? Does this make sense from a proliferation perspective? Does the Department of State

expect that DOE will continue to fund institutes that have graduated? What is the logic of this policy?

Answer:

State continues to fund graduated institutes that face the most important proliferation risks. Even after an institute has graduated, there may still be residual proliferation risk which we have to address through continued engagement.

Question:

Please itemize in former Soviet Union countries that are funded in whole or in part by the Department of State in 2008, the amounts per institute, and the project funded.

Answer:

State makes project funding decisions at the Governing Board meetings. At the ISTC, State funds science projects during three rounds of funding per year and at the STCU, twice per year. For FY2008, State has only funded projects at the ISTC and the STCU during one round each.

At the STCU Governing Board meeting in November 2007, State funded STCU Regular Project #3984 for $199,687. The main institute is Frantsevich Institute for Problems of Materials Science of National Academy of Science of Ukraine. The participating institutes include Yuzhnoye State Design Office of NSAU and the Georgian Technical University of Ministry of Education and Science of Georgia. State also funded two Targeted Research Initiative (TRI) projects in Azerbaijan. This initiative is aimed to increase host state funding at the STCU. The cost of funding the project is split 50/50, between the funding parties and the host state respectively. One Azeri TRI was STCU TRI Project #4520 for the amount of $24,966 with the Azeri Institute of Physics. The second Azeri TRI was STCU TRI Project #4523 for the amount of $24,866 with the Institute of Zoology, Institute of Radiation Problems, and the Institute of Chemical Problems.

At the ISTC Governing Board meeting in December 2007, State funded ISTC Regular Project #3515 in the amount of $90,000 at the Federal State Unitary Enterprise ″Russian Federal Nuclear Center - All-Russian Research Institute of Technical Physics named after Academician E.I. Zababakhin (VNIITF). State also co-funded ISTC Regular Project #3799 in the amount of $114,000 (half the cost) at the Khlopin Radium Institute, St Petersburg, Russia with the supporting institute NPO Mayak, Oziorsk, Chelyabinsk region, Russia.

These represent a small portion of what State intends to fund over the course of the fiscal year.

Question:

Please describe the nuclear safeguards agreements and verification procedures in place with Russia to protect and prevent the re-export of information related to projects funded under the Global Nuclear Energy Partnership by DOE.

Answer:

GIPP/GNEP projects potentially involving export controlled information or technology were structured to ensure that technology flows from Russia to the United States.

Question:

Does the United States have a ″123″ Agreement for Cooperation with Russia at this time? Has one been negotiated and initialed?

Answer:

Negotiations with Russia on the text of an Agreement for Peaceful Nuclear Cooperation (″123 Agreement″) were essentially completed in April 2007 and the text was initialed in Moscow on June 29, 2007. In their July 3, 2007 Declaration on Nuclear Energy and Nonproliferation Joint Actions, President Bush and President Putin noted the initialing of the text with satisfaction and highlighted their shared view that the Agreement, once signed and brought into force, will provide ″an essential basis″ for cooperation between the United States and Russia in the field of peaceful uses of nuclear energy.

The remaining statutorily-mandated steps toward securing the President's approval of the proposed Agreement and his authorization to sign it are pending within the Executive Branch. The Administration has not yet moved the proposed Agreement forward for the President's approval.

Question:

What policy differences are there with Russia which has caused the Department of State to refrain from submitting it to the Congress for review? Does this include concerns about the Bushehr reactor in Iran?

Answer:

The Administration does not regard Russia's support for the Bushehr project in Iran as in itself a reason to withhold signature of the Agreement and its transmittal

to Congress. The President has made clear his support for Russia's supply of nuclear fuel to Bushehr because it demonstrates that Iran does not need to possess the complete nuclear fuel cycle - with its latent proliferation risks - to take advantage of the peaceful uses of nuclear energy.

For the United States, having an agreement for Peaceful Nuclear Cooperation in place with Russia would provide a framework for potential commercial sales of civil nuclear commodities to Russia by U.S. industry. It would also facilitate U.S.-Russia cooperation in developing Global Nuclear Energy Partnership (GNEP) technologies, in particular the development of advanced fast burner reactors, the fuel for which would likely be developed in the United States and then be transferred to Russia pursuant to the 123 Agreement for test irradiation.

Question:

How does the State Department perceive the risk posed by certain institutes and WMD scientists? How does this view differ from that of DOE's?

Answer:

Global Threat Reduction (GTR) programs in the Office of Cooperative Threat Reduction are threat driven. State consults with the entire interagency on the risk posed by WMD expertise globally and then target our programs to mitigate these threats. CTR continues its redirecting efforts through the Science Centers Program because State assesses there is still a risk in the former Soviet Union of WMD expertise transfer to proliferant states or terrorists.

State defers to DOE to explain its view on how it perceives the risk posed by certain institutes and WMD scientists.

Question:

Is there benefit for State and DOE to collectively establish a system for evaluating proliferation risk for institutes and scientists to better target involvement in the IPP and ISTC program?

Answer:

Yes. As State stated during the Congressional hearing on January 23, we agree that we should work more closely to evaluate proliferation risks and will work with DOE to that end.

Question:

Some believe that due to Russia's increased financial prosperity, and to verbal commitments made by top government officials to help fund WMD scientists, that the U.S. should no longer fund the IPP program. Despite the rhetoric, has Russia made any tangible commitments to funding its own programs? If the U.S. withdrew funding, would Russia fund their own Soviet-era WMD scientists?

Answer:

State has been engaged in a dialogue with Russia to increase host state contributions to the International Science and Technology Center (ISTC). The U.S. and Russia have agreed that it is in both of our interests to help institutes reach self-sustainability. Russia is also increasing its own spending in areas that employ former weapons scientists. For example, Russian spending on public health spending has increased greatly and this trend has greatly contributed to many Russian biological institutes becoming financially self sustaining.

Question:

Can you further elaborate on State's ″exit strategy″? Is it simply to ″graduate″ institutes to financial self-sustainability?

Answer:

Self-sustainability programming is designed to decrease the resources necessary to engage WMD expertise in the former Soviet Union by graduating institutes so that we can redirect funds to emerging global threats.

However, State continues to engage institutes worldwide that face the most important proliferation risks, regardless of their graduation status because residual risk may exist despite financial self-sustainability. Thus, our exit strategy is to make institutes financially self-sustainable by 2012, but if in 2012 we perceive residual risks, we will still continue some level of engagement.

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