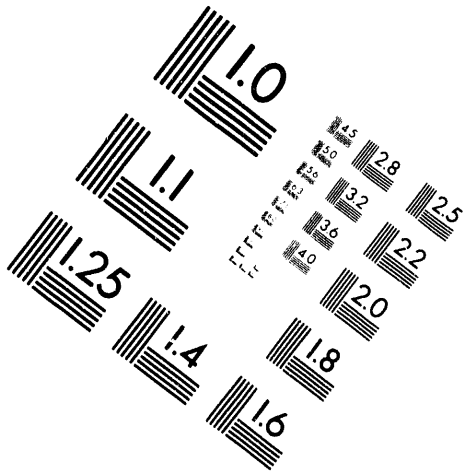


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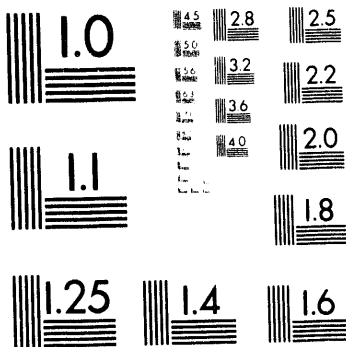
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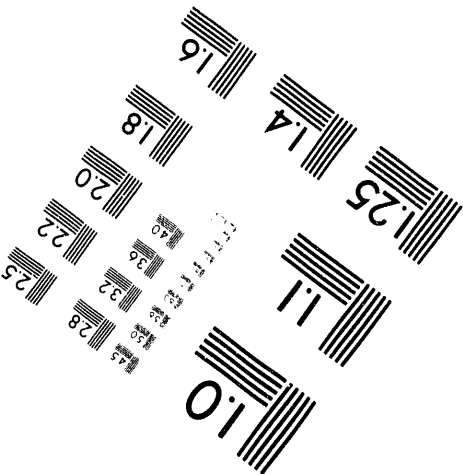
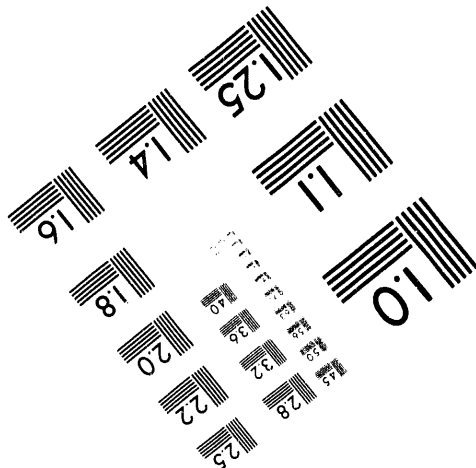
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Title: WEAPONS DISMANTLEMENT ISSUES IN INDEPENDENT UKRAINE

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Submitted to: 35th Annual Meeting of the Institute of Nuclear
Materials Management, Naples, Florida,
July 17-20, 1994

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WEAPONS DISMANTLEMENT ISSUES* IN INDEPENDENT UKRAINE

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ABSTRACT

The American Association for the Advancement of Science sponsored a seminar during September 1993, in Kiev, Ukraine, entitled "Toward a Nuclear Free Future—Barriers and Problems." It brought together Ukrainians, Belarusians, and Americans to discuss the legal, political, safeguards and security, economic, and technical dimensions of nuclear weapons dismantlement and destruction. US representatives initiated discussions on legal and treaty requirements and constraints, safeguards and security issues surrounding dismantlement, storage and disposition of nuclear materials, warhead transportation, and economic considerations. Ukrainians gave presentations on arguments for and against the Ukraine keeping nuclear weapons, Ukrainian Parliament non-approval of START I, alternative strategies for dismantling silos and launchers, and economic and security implications of nuclear weapons removal from the Ukraine. Participants from Belarus discussed proliferation and control regime issues. This paper will highlight and detail the issues, concerns, and possible impacts of the Ukraine's dismantlement of its nuclear weapons.

INTRODUCTION

The American Association for the Advancement of Science (AAAS) Program on Science and International Security sponsored a seminar in September 1993, at the Pushcha-Ozernaya Sanatorium on the outskirts of Kiev, Ukraine. The seminar was entitled "Towards a Nuclear

Free Future—Barriers and Problems." The seminar was co-sponsored by the International Institute for Global and Regional Security, headquartered in Kiev. The meeting was supported by the United States Institute of Peace, the US Arms Control and Disarmament Agency's Public Affairs Office, and the US Department of Energy's International Safeguards Division.

The seminar brought together about 30 Ukrainians, 3 Belarusians, and 8 Americans to discuss the legal, political, safeguards and security, economic, and technical dimensions of nuclear weapons dismantlement and destruction. Ukrainian participants included personnel from the International Institute on Global and Regional Security, Kiev University, National Security Council, Ministry of Defense, Ministry of Foreign Affairs, National Institute of Strategic Research, Institute of World Economy and International Relations, and Donetsk University. The Belarus participants were from the "West-East" Center, Ministry of Defense, and Belarus University. The United States participants were from the AAAS, Los Alamos National Laboratory (Los Alamos), Department of Defense, Arms Control and Disarmament Agency (ACDA), International Disarmament Corporation (IDC), and a consulting firm. The remaining US participant acted as a private individual. Two additional US personnel performing treaty verification activities attended the final two days of the seminar but did not participate in any discussions.

The remainder of this paper will present the exchange of issues and ideas by all the participants to highlight the underlying concerns of the Ukrainian participants. The "give and take" flavor of the discussions during the five days of the seminar is included to help interpret the context of the issues.

This work supported by the US Department of Energy, Office of Defense Programs.

BACKGROUND

During the seminar, the political tensions in the Ukraine were very high. President Kravchuk had announced his plans to assume the duties of Prime Minister, a position left vacant by the resignation of the previous minister. Many of the Parliament members were beginners in politics and were savoring their new freedom of speech and self-determination. Several of the Ukrainian seminar participants suggested that after the new elections scheduled for 1994, the Parliament was likely to be even more conservative. Large-scale anti-government demonstrations by nationalists from Western Ukraine were being held near the Parliament. The US delegates were informed that these demonstrators displayed some placards expressing the desire for the Ukraine to keep the strategic nuclear weapons left behind by the departing Russian military. Tensions between the nationalists in the west and the industrial east of the Ukraine were increasing. The nationalists were seeking closer ties with Poland, while the east, which contained many Russians, felt that economic survival depended upon maintaining good relations with Russia. It appeared that if a confederation were not established soon, the country might be divided.

Political tensions in Russia began to mount during the seminar as President Yeltsin struggled with the Russian Parliament. These events were of great concern to the Ukrainian people. The US delegates were reminded that the Ukraine had been overrun many times throughout its existence and that it could happen again. The Russians were rethinking the agreement to pay the Ukrainians for the highly enriched uranium and other components to be removed from the nuclear weapons the Russians left behind in the Ukraine. The country's economy was spiraling downward with few consumer goods available except at hard currency stores. Local vendors refused to take the Ukrainian currency (coupons), wanting dollars instead. During the week of the seminar, the coupons inflated nearly 20% against the US dollar.

With these issues and politics progressing during the seminar, US and Ukraine participants discussed a wide range of nuclear security issues including the costs associated with keeping the strategic nuclear weapons and delivery capabilities in their country.

THE SEMINAR

The first day of the seminar concerned the foundations of nuclear policies and expanded into legal and political issues surrounding nuclear dismantlement and

the psychology of being a nuclear state or non-nuclear state. Day 2 of the seminar included discussions on dismantling and storage problems and pitfalls. US participants presented papers on disabling and dismantling nuclear weapons and silo/delivery systems, storage of nuclear materials, safeguards and security requirements, perimeter monitoring, and health and safety issues. The third day involved presentations concerning control regimes, protection of nuclear weapon technologies, transportation of nuclear materials, and the destruction of warheads and launchers. Economic aspects and the related financial burdens of having nuclear weapons were the main topics for day four. These discussions were based on lessons learned by the US concerning the costs of disabling and destroying nuclear weapons: both direct and indirect costs. The final day of the seminar centered on nuclear issues as a factor in US/Ukraine, US/Russian, and Ukraine/Russian relations and the prospects for arms control and nonproliferation. While the discussions included many policy concerns, the US participants were not speaking officially for the United States government but were highlighting important issues that the Ukraine should consider concerning its nuclear weapons.

Treaties and Obligations

The meeting began with a broad-scale discussion by the US participants of the treaties and interpretations of START I & II; the Lisbon Protocol; Intermediate Nuclear Forces Treaty (INF); the Non-Proliferation Treaty; aspects of missile, bomber, and warhead dismantlement; and recent agreements signed by Ukraine President Kravchuk. Specifically highlighted were the international and legal obligations that the Ukraine was seen to have as a successor state to the Former Soviet Union, which would indicate that they were legally bound by the limits of START I and the INF. However, the Ukraine Parliament was debating the issue, and several Ukrainian seminar participants felt that they were under no legal obligations to honor any Soviet Union agreement originated before the independence of their country. Others believed that a future official could readily negate any prior treaty without an agreeing vote of Parliament.

Their reasons for desiring to be a nuclear state were apparently ones of self-defense. Tactical nuclear weapons systems had been removed by the Russian military as they left the country. The Ukrainian conventional defense forces were still being organized but, at this time, were felt to be incapable of protecting the country from invasion. They viewed their strategic nuclear weapons systems as a deterrent to invasion.

Several US personnel noted that the Ukraine's 1800 weapons were only aimed at the United States and western Europe. If the targeting were changed, how would we know? Logically, the United States people would have to assume that the intercontinental ballistic missiles were still targeted on the United States. The US would not support retargeting the ballistic missiles. The only viable alternative was to remove the missiles or to dismantle them completely. In the current use of nuclear weapons, they were not a deterrence to local aggression. In addition, monies that could be used to strengthen conventional military forces would be required for the maintenance and protection of the nuclear weapons. Several Ukrainian participants rejected the obligation of returning the weapons systems to Russia. They felt that once the Russians had the weapons, they would count them as part of their dismantlement totals, which would allow the Russians to keep more ballistic missiles. At this early stage in the seminar, it became apparent that there were no single issues guiding several participants' insistence that the country be a nuclear weapons state. Many issues, all intertwined, would be brought to light throughout the discussions.

The Economy

The economy of the Ukraine was tied to weapons dismantlement and removal in every discussion. The US participants discussed the obligations associated with the offered monies identified in the Nunn-Lugar appropriations and the domestic law that required the Ukraine to agree to destroy their weapons of mass destruction and forego their replacement to receive the funds. If the Ukraine did not respond and claim the offered support soon, the money may be redirected by the US Congress. It was not the intent of the United States to pay for the complete dismantlement of the nuclear weapons, but rather to provide help to start the process. Regardless of the funding offered by the United States, several of the Ukraine participants wanted to maintain the weapons to use them as bargaining chips. The Ukrainians complained that 12% of their budget was currently being directed to aid the Chernobyl cleanup. They estimated that nearly three billion dollars would be required to stabilize the economy, clean-up the environment, and destroy weapons. The costs to destroy the silos, launch platforms, nuclear weapons, and solid fuels would be very high. Support would be required to build new housing for the military put out of work by the dismantlement or removal of the nuclear weapons. Additional funds would be required to build the conventional military forces for self-protection. A few Ukraine participants wanted the ecology and

economy to be the first priority before removing any weapons or delivery systems because only 1% of the Ukraine was deemed ecologically clean and jobs were few. Further discussions on the economy included the need to recover materials available from the ICBM silos and launcher platforms and reuse those materials. Other participants thought the best way to stabilize the economy and protect the country's resources was to send the nuclear weapons back to Russia. Ukraine had signed an agreement with Russia to receive payment for the nuclear materials from the weapons returned to Russia. This payment could be in the form of credits for gas and oil, nuclear reactor fuel, or other goods including direct payment. If Ukraine dismantled the missiles and returned the nuclear materials to Russia, the country still would not have the technology to convert the rocket fuels and high explosives to commercial uses. If they did not remove the weapons, it was quite possible that Russia would cut off oil and gas supplies sorely required for the coming winter. Several Ukrainian speakers wanted the United States to furnish the technology necessary to support the economy and solve the problems associated with the weapons and the environment. US participants suggested that with the removal of weapons from the Ukraine and its entry into the world community, private investment would flow into the country, the economy would grow, and employment would increase. One of the US participants noted that the group of companies comprising the International Disarmament Corporation sponsored his attendance at the meeting to encourage the Ukraine to adopt an environment suitable for foreign investment by removing nuclear weapons from the country. Other Ukrainian speakers said that they believed that the United States and Western Europe would not supply the technology for the country to grow because that would cause competition with their industries. Rather, these countries would sell the Ukraine what they needed to maintain a strong influence and presence with the Ukraine's government.

The Los Alamos participant presented a detailed description, with associated cost estimates of what is required for building nuclear materials and weapons storage facilities to house the dismantled or functional weapons. These costs included security forces, monitoring systems, environmental monitoring, radiation and contamination monitoring, and specialized structures. The cost estimate for a facility built in the United States under current federal guidelines was 1.5 billion dollars. Although the amount in the Ukraine would be less, it would produce a continuing drain on the economy. However, a Ukraine participant stated that it would cost their country nothing to maintain the

weapons because the United States, England, France, and Russia would pay to maintain the weapons in a safe and secure manner rather than risk an accident or theft of the nuclear materials. At this time, a US participant from ACDA stated that the US and Russia had an agreement not to examine, maintain, or perform other work on each other's nuclear weapons and delivery systems.

Nuclear Materials Security and Safety

All participants at the meeting expressed a concern with Ukraine's abilities to adequately maintain and protect the nuclear weapons even after they were dismantled. One person from the Ukraine presented a description of a nuclear winter to highlight the potential result of an accident. He noted that the Ukraine has had 26 terrorist acts in one year against the state and new symbols of authority. Another person stated that although a problem does exist in maintaining the weapons, Ukrainians have been trained by the Russians to correct all problems; there are no grounds for concerns.

A US participant from the IDC raised several questions concerning reported safety problems the Ukraine has been having with the stored nuclear weapons. He discussed the general methods required to make a warhead inoperative, the 3 to 6 months required to complete an inventory, transportation of the materials, and the likelihood of maintaining the weapons for up to 7 years in interim storage. Also presented was the support being offered to Russia by the US government concerning the safe and secure transportation of weapons by rail and road for protection against fire, crushing, and terrorism. This kind of support might also be made available through the Nunn-Lugar appropriations to help the Ukraine.

The possibility of an unauthorized launch exists in the Ukraine as long as the weapons remain. The safest way to prevent such an action is to totally dismantle the weapons. But a Ukraine defense department official pointed out that Ukraine has no guarantees of safety or security if it gives up its nuclear weapons. Although the US participants viewed their country's actions as trying to help, several Ukraine attendees saw the US as exhibiting only selfish interests.

A US ACDA participant presented personal hazardous experiences he had with fires and glovebox explosions during his work in various nuclear materials programs as a means to highlight safety problems and issues associated with nuclear materials handling. Another US participant presented a summary discussing

the safety requirements that would be demanded of the Ukraine if it kept its nuclear weapons or nuclear materials from any dismantled weapons. The accident at Chernobyl was given as an example of international concerns, the costs of environmental contamination, and peoples' radiation exposures. Detailed and extensive monitoring for plutonium, uranium, tritium, and propellant materials would be required to provide assurance to the world that the Ukraine was safely maintaining its materials. Examples were presented that discussed the damage to people, the environment, and the earth when materials were mishandled. The means to be ready for any nuclear materials emergency would be costly. Associated with these costs would be those to prevent or mitigate sabotage involving nuclear materials, toxic materials, and/or their storage facilities.

The discussion concerning the safeguards and security requirements for maintaining the weapons and nuclear materials met with no questions about reasons for safeguards and security actions or costs associated with activities. The presentation highlighted physical protection needs to deny access to the materials, monitoring of the materials and weapons while in storage, and accounting for materials and weapons to provide assurance that they were still in their authorized locations. Examples were given of the wall thicknesses, access control and perimeter monitoring systems, surveillance systems, and procedural guidelines that would require many workers. IAEA inspection requirements were briefly examined to demonstrate the details and procedures associated with international inspection of non-strategic nuclear materials obligated by treaty as a successor state to the Former Soviet Union. A vivid picture of a sabotage event that involved nuclear materials but not a nuclear weapon was presented to reinforce the security obligations associated with having nuclear materials. The example involved a disgruntled employee who would steal a small quantity of plutonium and use it to contaminate a city's water supply. It was noted that the disgruntled employee could also create turmoil just by threatening to dump the material into a key point in the water distribution system. If the Ukraine were to keep the weapons or the nuclear materials, these safety and protection systems would be required not only by the nearby countries but by the people that these materials and weapons were supposed to protect.

Belarus participants presented a lengthy overview of the problems associated with keeping nuclear materials and weapons. They expressed a real concern about the illegal removal of low-enriched uranium from their country and the possibility of contamination. They discussed graphic examples of a Belarus customs official

accidentally catching smugglers with 100 kg of low-enriched uranium and others with radioactive isotopes. The Belarus speaker noted that many customs officials are afraid of anything in a lead container and, like most people, panic at the mention of radioactivity. But Belarus has taken steps to ease the situation. It has declared itself a nuclear-free state and was removing its weapons to Russia under a bilateral agreement. It also expected some payment from Russia for the nuclear materials in the returned weapons. Dismantling problems were not serious and well-developed procedures were used. Belarus has a nuclear safety control commission to check the Russian soldiers still remaining on Belarus territory to maintain the nuclear weapons prior to their return to Russia. Their country does not represent a nuclear threat because it produced only 4% of the missile and military products used by the Former Soviet Union. However, 17% of these products were produced in the Ukraine. They closed their presentation by stating that their country desired that the Ukraine should become a nuclear-free state just as Belarus had declared. Upon completion of this presentation, the US consultant noted that there really is not any unofficial or underground market for nuclear materials. He stated that a possible market may be an unknown organization rather than a country.

Security of the Country

As briefly discussed earlier, the security of the Ukraine was directly tied to the nuclear weapons left behind by the departing Russian military. The Ukraine participants firmly stated that the "common people" wanted the country to keep the nuclear weapons as they felt the weapons provided security and a deterrent against invasion from a neighboring country. Because the weapons were already on hand and the military had been trained in their use and maintenance, the nuclear weapons were the cheapest deterrent of all weapons, about 3% of the cost of all armaments. They noted that storage was probably not included in those estimates. The weapons could easily be made operational by breaking down the launch codes and retargeting. In fact, a Ukraine participant had announced that the code deciphering was nearing completion. Additionally, the strategic weapons could be changed to be used as tactical weapons for nearby targets. He reiterated that the public sees nuclear weapons as the only possibility of protection from invasion.

Another Ukraine participant noted that his country is concerned about its sovereignty. It has a lack of confidence in the United States support, which has caused the country not to ratify the START treaties. Security

assurances must be strong but still won't be believed. Only by keeping the nuclear weapons will the Ukraine keep its sovereignty. Forty-eight years after WWII, nuclear weapons are a successful deterrent. He estimated that removing the weapons would only save about 5% of the budget while keeping them will save more. Belgium has stated that the Ukraine should not expect any help since the other countries are having financial troubles. This participant accused President Kravchuk of neglecting the interests of the Ukrainian people. Without taking a timely definitive stand, the people are developing a negative impression. This talk produced a variety of further discussions within the Ukraine delegation present. One military officer agreed that there is a military threat from a nearby country, while another insisted that Ukraine must get security guarantees to assure its survival. A Belarusian colleague disagreed with the idea of a military threat but stated that an economic threat does exist. Other Ukrainian participants were concerned with transferring the nuclear weapons back to Russia because of the internal problems that were occurring within the country and believed that Russia may break into three parts. Still other speakers believed that any states who rejected nuclear weapons should be drawn into NATO for protection, as a reward for becoming non-nuclear. At the end of this series of discussions, a Ukrainian retired colonel working in the government noted that "A fighter for peace is a failed politician."

Throughout this series of discussions and arguments occurring among the Ukraine participants, the US speakers noted that the United States and other western European countries might be willing to provide assurances to the Ukraine to guarantee its security from invasion if the country gave up its nuclear weapons. However, several persons acknowledged that the internal strife brewing in the country may develop into a more serious problem than the risk of invasion from a neighboring country.

The last day of the seminar appeared to consolidate the important issues with Ukraine military personnel who now worked with the various institutes within the government. A colonel detailed the problems with protecting the country from invasion. He stated that Ukraine was not a nuclear state in military terms such as Pakistan or Iraq and only wanted national security. The nuclear weapons can be delivered 5000 km away but the country cannot protect its own borders. The nuclear weapons in the country are a hindrance to the security of the Ukraine by prohibiting the development of the conventional army forces.

SUMMARY

The participants from the Ukraine represented a selection of personnel from universities, the military, and others who interacted directly with the Parliament. The seminar was covered in detail by the local news services. The US participants acted as an information resource during the seminar concerning the ramifications associated with Ukraine's keeping and maintaining nuclear weapons and materials. They responded in an unofficial capacity to questions, concerns, and technical issues to educate representatives of the newly independent country concerning problems that had been left on their doorstep by the departing Russian military during the collapse of the Former Soviet Union. However, the fear of invasion and the collapse of the economy might allow other forces to control the final disposition of the nuclear weapons and components. The nuclear weapons were believed by many in the Ukraine to provide stability and security for the new country. Others believed that the weapons were a means to achieve economic growth and to obtain aid from the West. Until this seminar, the Ukraine participants did not have an understanding of the complete costs for keeping the weapons.

The meeting was well received. Several US participants had noted that the Ukrainians came to the meeting with a strong desire to keep the weapons. During the five days of the meeting, they had assembled the facts presented by the US participants concerning the impacts the nuclear weapons and delivery systems would have on their economy and security. By the end of the seminar, many had realized that the weapons were not a potential cure-all for the independent Ukraine's problems.

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