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JPRS Report

Proliferation Issues

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SPRINGFIELD, VA. 22161

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PROLIFERATION ISSUES

JPRS-TND-92-016

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27 May 1992

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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SOUTH AFRICA

Japanese Transport of Plutonium Raises Concern

92WP0227A Johannesburg SUNDAY TIMES
in English 26 Apr 92 p 7

[Article by Ryan Cresswell: "Secret Scheme To Ship Lethal Cargo Round SA"]

[Text] The Japanese have a secret plan to ship huge quantities of plutonium—one of the most lethal and toxic substances known to man—around the treacherous Cape sea route.

Conservationists say that in the event of the radioactive cargo leaking while rounding South Africa, thousands of people might face the risk of cancer.

And the long-term impact on the environment would be disastrous, warned the environmental watchdog group Greenpeace International, which exposed the plan.

A single speck of the highly radioactive material can be fatal.

Mr Tom Clements, a Greenpeace spokesman in Washington D.C., said the first of many shipments from Europe to Japan—where the plutonium will be used to generate electricity—would take place in about five months.

Leak

The form in which it is to be transported—as plutonium oxide particles—is especially dangerous because it is easily inhaled or absorbed into the food chain. Plutonium remains hazardous for tens of thousands of years.

Mr Clements said: "In a worst case scenario, if there was a surface leak, in wrong wind and close to shore, thousands of people would get cancer.

"If there was a deep-sea leak, plutonium would enter the food chain and you would have a long-term ecological disaster."

Mr Clements said the route for the first shipment had not yet been finalised, but he had been told the parties involved were "leaning towards the Cape of Good Hope route rather than the more sensitive route through the Panama Canal or the longer route around Cape Horn."

The Suez Canal route has apparently been excluded because the area is too volatile.

Security

Mr Clements said: "If Japan chooses the Cape route, which is very likely, South Africans should be deeply concerned as to the environmental threat passing near their shores. A plutonium shipment in the rough water off southern Africa is nothing less than an idiotic idea."

Amounts of about one metric ton of plutonium will be carried on each trip.

A spokesman for the Department of Transport's marine division said the department had not been notified that plutonium would be shipped around South Africa.

Book Details Attempted Soviet Missile Purchase

92WP0226A Cape Town THE ARGUS in English
14 Apr 92 p 10

[Article by James Tomlins: "Are SA's 'Red Missiles' Still Sailing in the Sunset?"]

[Text] Paris—A French arms dealer has disclosed that in 1986 South Africa paid \$21 million (now nearly R61 million) for Soviet missiles which were never delivered.

He was referring to the scandal known as the Pia Vesta affair, after the Copenhagen-registered vessel chartered to transport the missiles from the Baltic port of Rostock.

The ship went by the Cape Horn route to Peru, as the "end certificate" of delivery was made out to that country, but was then scheduled to sail to Durban.

In fact, Pia Vesta with its arms cargo was seized in the Panama Canal by then-President Manuel Noriega at the request of Cuba's President Fidel Castro. The cargo was never seen again.

These general facts became known within time, but more crunchy details have been given by French arms dealer Mr. Georges Starckmann in his book *Canon Noir* published here this week.

His South African connection began in 1985 when one of his agents, Egyptian-born Mr. Gabriel Sheboub, arrived from Johannesburg with an arms order.

Pretoria wanted to buy 160 Soviet-made Gaskin Sa-9 missiles with an 8-km range, and 20 BDRM-2 four-wheel-drive armoured launch vehicles, together with space parts.

South Africa gave a letter of credit on February 17 1986 for \$21,452,150, covering the arms and transport costs.

But before then Mr. Sheboub had appeared at the Geneva headquarters of Mr. Starckmann with a Johannesburg lawyer representing the buyers.

"There were technical details to study and immediate decisions to take which could only be done face-to-face with competent experts.

"After some hesitation the real clients showed up in Geneva.

"Six of them arrived directly from South Africa. Only two seemed to be in charge of the operation so I dealt with them. I knew only their first names—Toni and Basil. Who were they? Who did they represent? A mystery. All I can say is that they were formally dressed and 100 percent Afrikaners.

"I could never understand why they wanted these missiles. Were they preparing a secession of a South African province? Were the missiles intended for Unita? This I found difficult to believe as peace negotiations were fairly well advanced by then.

"Some sources said the missiles were intended to destroy the Angolan Air Force. But will we ever know?"

- A spokesman for Armscor said the story contained in Mr. Starckmann's book was "speculative" and Armscor had no comment on it.

U.S. Concern for Mideast Proliferation Queried*OW1005110292 Beijing XINHUA in English
1035 GMT 10 May 92*

["U.S. Concerned About Arms Proliferation as Major Supplier"—XINHUA headline]

[Text] Washington, May 10 (XINHUA)—The United States said it had been worrying about the arms proliferation in the Middle East though it was one of the biggest arms suppliers to the region.

Those remarks were made by a U.S. State Department spokesman before a meeting of the working group on arms control here next week. The session is part of the U.S.-Russian sponsored multilateral Mideast peace talks launched in Moscow in late January.

However, a researcher of the U.S. Arms Control Association said that the U.S. Government was more interested in weapon sales than arms control.

The administration is taking advantage of the victory in the Gulf war to promote arms sales, he added.

According to THE WASHINGTON POST, not only has the Pentagon been involved in arms export, but the State Department has also ordered the U.S. embassies to help promote weapon sales abroad.

The American arms exporters earlier had to spend 17 million U.S. dollars annually on leasing aircraft and tanks from the Pentagon for arms exhibitions abroad.

Last June the Pentagon decided on a new policy to offer free exhibits and transport and send servicemen of Gulf war to help boost arms sales in foreign exhibitions.

The United States has benefited considerably from the subsidizing policy. The latest statistics by the U.S. Congress showed that the arms export reached a record of 23 billion dollars last year, a rise of 64 percent over 1990, and most of the export was to the Middle East.

According to the Arms Control Association, the United States has exported 19 billion dollars of weapons to the Mideast countries in 17 months since the Iraqi invasion of Kuwait in August 1990.

It added that 6 billion of the 19 billion dollars of arms were exported after the U.S. President George Bush proposed to the five permanent members of the United Nations Security Council to limit their arms sale to the Middle East last May.

The U.S. Government has come under criticism in the Congress for calling for arms control on one hand while expanding weapon sales on the other.

Chairman of the House Mideast Affairs Subcommittee Hamilton said that he did not see any real restraint in the American arms exports to the Middle East.

He blamed the "bad example of the United States in dumping arms in the Middle East for little progress in the talks on arms control in the region. [no closing quotation mark as received]

Why do other nations need to exercise restraint as the U.S. tries to expand its market, he asked.

The 221 House representatives said in a letter to President Bush that the huge export of arms to the Middle East does not comply with any meaningful arms control policy and can greatly intensify the arms race in the region.

It will not be justified for the U.S. officials to ask Russia, China, Britain and France to restrain their weapon exports to the Middle East, they added.

Despite the censures, the U.S. Government was reported to have set a goal of 35 billion dollars of arms export this year, most of them to the Middle East.

Li Peng Supports Nuclear Proliferation Meeting*OW2005105792 Beijing XINHUA in English
1031 GMT 20 May 92*

[Excerpt] Beijing, May 20 (XINHUA)—Chinese Premier Li Peng has voiced support for the call for a five-nation meeting on nuclear non-proliferation in South Asia.

Li made the statement in an interview with a Beijing-based correspondent of the PRESS TRUST OF INDIA Tuesday, when he was asked about China's views on the meeting.

Li said that China always pursues an independent foreign policy of peace and holds that the international community should earnestly deal with and solve the two major issues of peace and development.

He noted that China supports the efforts of relevant countries in various regions for establishing nuclear-free zones and peace zones on a voluntary basis.

Therefore, he added, as long as the discussed meeting accords with the principles of peace and development and other relevant countries also agree to participate, there will be no difficulty on the part of China in participating the meeting. [passage omitted]

Sino-Russian Nuclear Analysis Lab Operational*OW1305090292 Beijing XINHUA in English
0855 GMT 13 May 92*

[Text] Harbin, May 13 (XINHUA)—A nuclear analysis laboratory jointly founded by Russia and northeast China's Heilongjiang Province has recently entered into operation, according to provincial government sources.

Most of the analysis equipment is provided by the Russian side while the computer system is from the Chinese partner. Now all the equipment has been functioning well.

According to the sources, the investment for the lab totalled 140,000 U.S. dollars, with 90,000 U.S. dollars from the Chinese side and the rest from the Russian partner.

The lab was established in accordance with an agreement between the two sides which was signed in December of 1990.

According to the agreement, the lab will engage in supplying Chinese firms with nuclear analysis apparatus that is widely used in mining, metallurgy, coal, petroleum and many other industries.

NORTH KOREA

Foreign Ministry Demands Access to U.S., ROK Sites

OW1005192892 Beijing XINHUA in English
1617 GMT 10 May 92

[Text] Pyongyang, May 10 (XINHUA)—Denuclearization on the Korean peninsula could not be achieved if the United States and South Korea failed to accept comprehensive inspection of the latter's nuclear facilities, a DPRK Foreign Ministry spokesman said today.

Pyongyang had already signed a nuclear security agreement with International Atomic Energy Agency (IAEA), the spokesman said.

Nuclear inspections would be carried out in the wake of wide-ranging discussions on nuclear inspection issues between Pyongyang and the IAEA, the KOREAN CENTRAL NEWS AGENCY reported.

The spokesman said that once inspection in the North was carried out, similar access to American nuclear facilities in South Korea had to be guaranteed.

Pyongyang would only accept inspection of its nuclear facilities provided Seoul agreed to the same, he said.

The DPRK Government would strive to ensure comprehensive inspection on both sides of a peninsula which it hoped to see denuclearized, he added.

IAEA Chief on Agreement to Nuclear Inspections

OW1605190192 Beijing XINHUA in English
1821 GMT 16 May 92

[Text] Pyongyang, May 16 (XINHUA)—Hans Blix, chief of the International Atomic Energy Agency (IAEA), said here today inspection team of the IAEA would inspect nuclear facilities in the Democratic People's Republic of Korea in the weeks to come.

Hans Blix was quoted by the KOREAN CENTRAL NEWS AGENCY as saying that it was a great advance that DPRK agreed to accept international nuclear inspections.

The DPRK Government had promised to confine all its nuclear plans to peaceful purposes, fully respect and carry out the accord of nuclear security, Hans Blix said.

He also emphasized the DPRK Government would allow the IAEA team to inspect all the nuclear facilities on the DPRK provided list and consult with anyone concerned.

During the tour, the IAEA chief pointed out that DPRK had achieved great progress in peaceful application of nuclear energy and the security standard of natural graphite-uranium reactor was "quite high."

Hans Blix also discussed with DPRK official concerned on cooperations between the DPRK and the IAEA.

He promised that IAEA would help DPRK draw up its energy development plan.

He hoped the inter-Korean talks on implementing the Joint Declaration of the Denuclearization of the Peninsular would achieve a success.

Hans Blix arrived here on May 11.

Experimental Refining of Plutonium Acknowledged

HK1505120992 Hong Kong AFP in English
1103 GMT 15 May 92

[Text] Beijing, May 15 (AFP)—North Korea acknowledged Friday that it had succeeded in refining plutonium, but said the amount produced was small and for experimental purposes.

"There is in our country an experimental house of radiochemistry now under construction and almost completed," Ambassador Li Sam-ro told reporters. "It is not a factory, but a small device for experimentation."

"A minimum amount of plutonium" had been produced, Li said.

The official was speaking at the end of three days of talks here on normalizing relations with Japan, which were largely stalemated over Tokyo's demand for Pyongyang's assurance that it did not have secret plans to build a nuclear weapon.

There was no indication if North Korea was continuing to produce plutonium, a Japanese Foreign Ministry spokesman said.

"They said they have this radiochemical laboratory in which they experimented with the separation of plutonium and uranium," said the spokesman, Asian Affairs Bureau deputy director general Shigeo Takenaka.

"They said they produced a small quantity of plutonium. I don't know how much," he said.

Japan has said that no progress is possible in the normalization talks—held since January last year—without North Korea's assurances that it was not trying to make a nuclear device, as Western intelligence reports have suggested.

"It is important to make clear to the world that North Korea is not making secret efforts to engage in a nuclear development program," Takenaka said. "Until this nuclear issue is resolved, North Koreans cannot expect to have substantive progress in the normalization process."

Pyongyang has agreed to abide by the international nuclear safeguards accord and last month submitted a list of its nuclear facilities and material to the International Atomic Energy Agency (IAEA).

IAEA Director General Hans Blix was in North Korea for an initial visit in advance of a formal inspection of the facilities. He was scheduled to hold a news conference in Beijing on Saturday.

The Japanese spokesman said that the two sides agreed to hold a next round of normalization talks at the end of July in expectation that the inspection would be made by then.

But he added that IAEA inspection alone may not clear up Japan's concerns.

"If the IAEA inspection is adequately carried out and proves to the world that North Korea is not entertaining such a program, that's quite enough," he said. "If not, we need something else."

Takenaka said the seventh round of talks just concluded had made no progress, but Li, the North Korean chief negotiator, said the meetings had "advanced" the two sides toward normalization.

"To make our talks advance radically the Japanese side should withdraw all preconditions which present artificial difficulties for advancing the talks," Li said, apparently referring to the nuclear safeguards issue.

The other key issue that remains to be solved is North Korea's demand that Japan pay compensation for its 1910-1945 occupation of the Korean peninsula, including atrocities such as forcing Korean women into prostitution as "comfort women" to Imperial Army troops.

Japan was represented at the talks by Ambassador Noboru Nakahira.

SOUTH KOREA

Seoul To Exclude U.S. in Nuclear Inspection

OW1205075892 Beijing XINHUA in English
0732 GMT 12 May 92

[Text] Pyongyang, May 12 (XINHUA)—South Korea has decided to exclude U.S. participation in the inter-Korea nuclear inspection, according to a South Korean official.

The decision was made in a policy meeting held before the 7th North-South premier talks in Seoul last week, the official said, adding Seoul had informed the U.S. of the decision.

He explained that the U.S. involvement in the inspection would cause misunderstanding. It is unnecessary for the U.S. to interfere in inter-Korea relations, he noted.

But highly technological as it is, he continued, the nuclear inspection thus needs indirect U.S. assistance in technology and equipment.

Under an accord reached by the Democratic People's Republic of Korea (DPRK) and South Korea, an inter-Korea nuclear inspection would be materialized.

The DPRK maintained that the nuclear inspection should include American nuclear arms and bases deployed in South Korea, and only on the premise will DPRK accept the inspection.

Rocket Technology Accord Reached With PRC

SK1305065992 Seoul CHUNGANG ILBO
in Korean 12 May 92 p 1

[Report by Beijing-based correspondent Chon Taek-won]

[Text] A Chinese official disclosed on 12 May that the ROK and China have agreed to cooperate on a long-term basis in the aircraft manufacturing and rocket industries. The concerned official said the two countries will exchange an agreement on 30 May in Seoul regarding the exchange of technology and information, mutual trade, and joint production and export in the fields of basic materials industries development, civil aviation, and the rocket industry, and in some fields of the defense industry.

According to the official, such an agreement thus far has been worked out between China's Ministry of Aeronautics and Astronautics Industry and Ministry of Foreign Economic Relations and Trade and the ROK's Ministry of Trade and Industry. However, because the two countries have no diplomatic relations, the agreement will be signed publicly by the China National Aero-Technology Import and Export Corporation [CATIC] and the International Monetary and Financial Corporation from the Chinese side and an organ concerned from the ROK side.

The official added that during the period from 26 February to 8 March, five specialists from the ROK side made an observation tour of aircraft industry facilities in Beijing and the underground military supplies production facilities in Guizhou Province, which have not been opened to the outside.

According to the official, the ROK specialists found during the observation tour that compared to their on-the-spot survey in the United States and Russia, Chinese equipment and facilities were superior to the United States and Russia in technology and price.

The official said that the ROK is still at the assembling stage in the aircraft manufacturing industry. However, China has an independent production technology, in addition to production technology under U.S. license, in its aircraft manufacturing and rocket industries, and its production technology has reached world level. The Chinese side is to provide its advanced technology in this field to the ROK.

The official said: If the ROK and China maintain their cooperation in the aircraft manufacturing and rocket industries for seven to eight years, in the future, they will not only rank first in Asia, outrunning Japan, in the aircraft manufacturing and rocket industries, but will be able to export coproducts of the two countries to Southeast Asian countries, including Thailand and Malaysia, and even North Korea.

Despite its purchase of aircraft and spare parts amounting to as much as \$20 billion annually from the United States, which is virtually the only country from which it purchases, the ROK has been forced to purchase spare parts at a high price, while being blocked from receiving technology. It is believed that China, perceiving the situation facing the ROK, is attempting to gain technological cooperation, which is difficult to expect from the United States and Japan, through cooperation with the ROK.

The Chinese side will dispatch a six-member delegation led by Tang Xiaoping, vice president of the CATIC, to the ROK on 24 May to exchange the agreement.

INDIA

U.S. Notes 'Global Concern' on Proliferation 92WP0230 Madras *THE HINDU* in English 26 Apr 92 p 1

[Article by Malini Parthasarathy]

[Text] Washington, April 25—The U.S. Under Secretary of State for International Security Affairs, Mr. Reginald Bartholomew, said here that there was "no sense of pressuring India" on the nuclear nonproliferation issue but remained firm in expressing his belief that India and other countries would have to reckon with the reality that nonproliferation had become a "global concern."

"We don't have a sense of pressuring India ... I can say this fairly and flatly," Mr. Bartholomew said in the course of a conversation at his office today. He was responding to an observation by this correspondent that public opinion in India is strongly resistant to any suggestion that would amount to diluting India's nuclear sovereignty or surrendering its nuclear option. "We understand the basic nature of Indian policy," he said. "But, at the same time the Indian people must recognise the importance of the non-proliferation effort."

"I want to underscore this point ... India is not being singled out, we are pressing all nonmembers... It may have been true that in the past, U.S. administrations thought it incumbent on them to press nonproliferation as a special responsibility that went with America's role. But America's interest is not any more engaged in nonproliferation than any other country ... nonproliferation is not an American thing..." Mr. Bartholomew said. India and other countries, he maintained, "are going to have to reckon with the global concern and the global interest in nonproliferation." Germany and France for instance were strong proponents of nonproliferation, he said.

Asked whether in the light of India's reservations on efforts to conscript it to an adherence to a nonproliferation regime, it would not be better to shift the focus to confidence building measures between India and Pakistan where the aim would be the elimination of the threat of nuclear war in the subcontinent, other than the elimination of weapons themselves, Mr. Bartholomew said: "What we are saying is begin the process. We welcome progress on the issue in whatever form. Confidence building steps are all to the good. We are not saying that you have to subscribe to a regime right away. All we are saying is—start the process. We are not saying that India would have to sign a paper on day one. We suggested a five nation conference only because we thought this would be a framework that could enhance progress."

"It is very, very important to note that we do not have a sense of suggesting that India and Pakistan do anything counter to their interests. We do not expect India to take steps that are not justifiable in India's interest. What we want is practical steps to get moving to address nonproliferation concerns."

Interestingly, Mr. Bartholomew emphasised that the United States did not want to be "ideological" in its approach to the issue. "We have said that we are interested in practical steps such as CBMs [expansion not given] as the agreement not to attack each other's nuclear facilities." In what suggested more a ritual reference than a substantive indication of direction, Mr. Bartholomew said that none of these (CBMs) would preclude the United States "making clear where the process ought to go." But the fact of the matter, he said, was that "we don't want to be ideological about it..."

Mr. Bartholomew made clear that the proposed five nation conference was not structured and that it had not yet taken concrete shape. "It is not a case of us having a blueprint for the conference. We will come to the table with our ideas and so can the others." In response to the point that China's role in the proposed conference whether as guarantor or participant remained unclear and this ambiguity was one reason for India's reluctance to entertain the five nation proposal, Mr. Bartholomew said: "We are open to the question as to how China is to figure ... all this can be worked out..."

Asked whether the United States was pushing for a cancellation of the rocket technology deal between Russia and India in the light of Russia's interest in subscribing to a missile technology control regime, Mr. Bartholomew was reluctant to comment on the issue. "These are matters relating to ongoing discussions." But he affirmed that there were discussions on the MTCR [Missile Technology Control Regime] being applied to several cases such as Russia, India, China and South Africa. "We need to understand the concern for a global missile technology regime at this point."

Reactions to U.S. Sanctions Continue

Committee To Assess Impact

BK1505151892 Delhi All India Radio Network
in English 1430 GMT 15 May 92

[Text] The chairman of the Indian Space Commission, Professor U.R. Rao, today announced that the country will launch the ASLV [Augmented Satellite Launch Vehicle] within the next few days and INSA-2A [Indian satellite] by the end of next month as scheduled. He was speaking at a function in Tirupati. He said that the space technology has opened doors for human development through monitoring of droughts, floods, and other natural disasters.

Professor Rao expressed the hope that the Indian scientists will be able to face the challenges following the U.S. sanctions against ISRO [Indian Space Research Organization]. Meanwhile, the Space Applications Center has formed a committee to assess the impact of the U.S. sanctions against the ISRO. The committee is headed by its director Mr. Pramod Kale.

Delay of Projects Expected

*BK1505160092 Delhi All India Radio Network
in English 1530 GMT 15 May 92*

[Text] The Space Applications Center has formed a committee to assess the impact of the U.S. sanctions against the Indian Space Research Organization. The committee is headed by its director Dr. Pramod Kale. Talking to newsmen in Ahmedabad, Dr. Kale said he does not anticipate any serious problems because of the sanctions. He said the launch of INSAT-2A satellite scheduled next month will not change. Dr. Kale, however, admitted the sanctions may delay six projects, including INSAT-2B, a geostationary satellite scheduled to be launched next year.

Successful Launch Reported

*BK2005081492 Delhi All India Radio Network
in English 0730 GMT 20 May 92*

[Text] The (Soar)-C satellite successfully injected into space by the ASLV [Augmented Satellite Launch Vehicle] from the Sriharikota Range in coastal Andhra Pradesh this morning is performing satisfactorily. According to the Indian Space Research Organization, ISRO, the satellite is functioning as per the expected parameters. The satellite is being monitored from the tracking stations at Car Nicobar, Trivandrum, and Bangalore. The chairman of the Space Commission, Professor U.R. Rao, and a number of scientists witnessed the launch. Mr. M.R.S. Dev is the project director of the launch vehicle. Professor Rao told newsmen at Sriharikota after the launch that the ASLV performed exactly as it was supposed to. Professor Rao said the exact orbit of the satellite will be known soon after the various parameters are known from the tracking stations. He said despite the failure of the two earlier ASLV missions, the ASLV D-3 carries a number of new technologies in it.

Space Technology Cooperation With China Noted

*BK1505150092 Delhi All India Radio Network
in English 1430 GMT 15 May 92*

[Text] India and China have been in touch with each other during the last five months on cooperation in space technology. An External Affairs Ministry spokesman, replying to a query, said the memorandum of understanding was signed between the Ministry of Aerospace Industry of China and the Department of Space during the prime minister Mr. Li Peng's visit to New Delhi. It was agreed by the two sides to cooperate in peaceful applications of outer space science and technology.

IRAN**U.S. Cited as 'Leading Dealer' in Arms to Mideast**

*LD1105134492 Tehran IRNA in English
1238 GMT 11 May 92*

[Text] London, May, 11, IRNA—A year after its highly publicised arms control initiative, the U.S. is now the leading dealer in soaring arms sales to the Middle East.

Having already netted 19 billion dollars in arms transfers to the Middle East since the end of the Persian Gulf war, America's commitment to its own arms policy is in short supply.

The U.S. is at present engaged in a joint project with the Zionist state of Israel to develop the Arrow ballistic missile interceptor, a Zionist intelligence satellite as well as integrated radar defence systems, 'THE FINANCIAL TIMES' reports.

Proposed arms sales to the Middle East are valued at 30 billion dollars, a dramatic leap from figures for 1990 released by the International Peace Research Institute based in Stockholm. According to the Institute, the year before the Persian Gulf war saw sales of conventional weapons to the Middle East standing at just over 4 billion dollars.

While the Zionist state is under no pressure from the west to curb arms proliferation, the U.S. fears an Israeli pre-emptive strike against Syria may spark of a new Middle East war. Observers speculate that a deferred transfer of short-range M-9 missiles from China to Syria may currently be taking place.

Much to the consternation of the four other permanent members of the United Nations Security Council, China has yet to abide by the missile technology control regime, a western scheme to halt the proliferation of missile technology.

Israeli intelligence officials are particularly worried at the former Soviet bloc's readiness to sell to the Middle East top-line MiG 29 aircraft, T-72 tanks and advanced surface-to-air missiles.

Strategic uncertainties arising from the inconclusive Persian Gulf war are, say military analysts, factors in explaining the post-war arms build-up in the region.

MOROCCO**Berrada on Proposed Nuclear Power Plant**

*92AF0789Z Casablanca MAROC SOIR in French
22 Apr 92 p 7*

[Interview with Mekki Berrada Abdelhamid, nuclear engineering specialist and deputy general director of the National Electricity Office (ONE); place and date not given: "Nuclear Energy for Scientific and Economic Progress: Morocco Will Soon Have Nuclear Power Plant at Sidi Boulbra (Essaouira Province)"]

[Text] For more than 50 years, Morocco has been using radioactive isotopes in medicine and agriculture. Today they are used in geology, industry, veterinary medicine, hydraulic engineering, education, and research.

Thanks to His Majesty King Hassan II's personal concern for the advance of science and technology, Morocco—most of whose human, agricultural, mineral and energy potential is still undeveloped—is constantly encouraging the development of these technologies for the benefit of the citizenry as a whole.

Moreover, several large projects to apply nuclear technology are even now under way: extraction of uranium from phosphates, site studies for the first nuclear generating plant, construction of the Center for Nuclear Studies, the nuclear regulatory code....

In order to sensitize the public to the many advantages of nuclear energy in all domains of economic activity, Mr. Mekki Berrada Abdelhamid, nuclear engineering specialist, deputy general director of ONE [National Electricity Office], honorary president of the Morocco Engineers Group and founding president of the Morocco Association of Nuclear Engineers, has graciously agreed to answer our questions about the use of nuclear energy in our country, its growth, and the laws that regulate it.

[MAROC SOIR] Why was Sidi Boulbra chosen as the site for construction of the kingdom's first nuclear electric generating station?

[Berrada] An examination of all the documents and information assembled from Moroccan and foreign organizations indicated, given the very large requirement for cooling water (50 cubic meters per second for a 100-megawatt unit), that sites should be sought near the coastal region. That was the first factor. The second important factor in the choice of region was the seismic factor, which affects the structural survivability of buildings and equipment at the generating plant.

The third factor considered was the proximity to large centers of electric energy consumption.

Taking these three factors into account, we were led to pick the Kenitra-Essaouira region as best suited to serve as the site for Morocco's first nuclear power plant.

So the decision was between the localities of Sidi Boulbra and Bir Al Har. Sidi Boulbra was selected as the preferred candidate, following the recommendations of experts from the nuclear site evaluation department of the IAEA [International Atomic Energy Agency], which closely meshed with those emerging from studies of the Casablanca, Rabat, El Jadidia, Safi, and Essaouira regions carried out by the French company SOFRATOME. I would point out that these studies were done over a period of nearly eight years, and studies of Sidi Boulbra are currently being conducted to confirm the choice.

[MAROC SOIR] How much energy does Morocco need?

[Berrada] Projections estimating the country's future electric energy needs, based on 7-percent annual growth, show that by the year 2005 Morocco will need on the order of 25 billion kilowatt-hours (kWh).

[MAROC SOIR] Is there a capital investment program in place to build that capacity?

[Berrada] The capital investment program to meet this need follows the guidelines of the national energy plan, which is based on massive mobilization of untapped hydroelectric potential, greater emphasis on domestic coal (through increased production) and domestic hydrocarbon resources, exploitation of oil shale, renewable energy sources, and the introduction of nuclear power production.

In principle, the nuclear option could be considered a promising alternative, in part because our phosphates contain uranium and because the cost per kWh of nuclear energy is low.

[MAROC SOIR] What peaceful applications are there for nuclear energy?

[Berrada] There are many such domains. First of all in the field of health, notably in biology and medicine, radioactive isotopes have two very useful properties. They can be substituted for the corresponding stable atoms in a molecule to create a "tracer molecule," which can easily be detected because of its characteristic radioactive emission. Second, they produce radiation that modifies living tissue when interacting with it, a fact that is responsible for the great advances of nuclear medicine, both in diagnosis and in therapeutic applications.

The field of research into soil-plant systems is very complex, and the processes of transferral and migration of water, air and nutritive elements into the soil—and from the soil into and through the plant—cannot be understood using traditional methods of quantitative chemical and physical analysis. An understanding of the concentrations compatible with the needs of various crops, the necessary ratios of concentration of different elements and the interactions between them is of the greatest importance in trying to improve yields, both quantitatively and qualitatively. In the field of veterinary medicine, it has facilitated major physiological explorations and detailed clinical information—in the field of milk production, for example, data on composition of diet, consumption of nutritive elements in the system, hormonal dosages in reproductive management. In industrial radiography, which is one of the most frequently used methods of obtaining information on the internal structure of products. In geology, for analysis in the laboratory and exploration in the field...

[MAROC SOIR] Nuclear energy seems to have applications everywhere. Is there any danger?

[Berrada] Nuclear applications are significantly expanding in our country. Their importance will probably continue to grow in years to come, thanks to the activities of the Center for Nuclear Studies (CNESTEN) and, over the longer term, the introduction of electric energy from nuclear plants. All these considerations led the authorities, from the very beginning, to integrate the regulatory and legislative aspects, which constitute the basis of state control, into the process of planning and implementing our nuclear program, in order to effectively assure the safe operation of our future nuclear installations and at the same time fill the existing juridical vacuum in the field of nuclear applications and technologies.

[MAROC SOIR] You have spoken of CNESTEN. What is that?

[Berrada] The government of His Majesty King Hassan II, who takes a personal interest in the development of science and technology, has established the National Center of Nuclear Energy, Sciences and Technologies (CNESTEN), with a view to providing infrastructure, an organizational

framework, and support of every kind to all such activities. It is a public-sector institution of a scientific, technical, and industrial character, legally incorporated and financially autonomous. It falls under the overall jurisdiction of the Ministry of Energy and Mines, and its headquarters are located in Rabat. It has a nationwide mandate to promote and coordinate all uses of nuclear technologies in the various socioeconomic sectors of the country and to provide support for implementation of various phases of the nuclear electric power program in conjunction with the energy directorate of the Ministry of Energy and Mines. Its skills and resources will be used to provide effective training of the technical personnel needed for the building and operation of these installations, nuclear fuels management, safety analyses and technical inspection.

In the field of public information and promotion of other applications of nuclear technology, CNESTEN plays a fundamental role, in collaboration with the other departments concerned, including Public Health, Agriculture, Industry and Scientific Research.

[MAROC SOIR] What conditions must be met at the national level to build the country's first nuclear electric generating facility?

[Berrada] These conditions, as set forth by IAEA experts, can be briefly summarized as follows:

- long-term justification for the nuclear option;
- the state's commitment to a program;
- juridical infrastructure to deal with radiological protection and nuclear safety, promulgation of the implementing laws, civilian responsibility.
- an electrical distribution network with the capacity and other necessary features to accept additional output, probably at the highest power levels of any on the system when they are put into service, which will be operated at a very high load factor.
- acceptability of the nuclear option to the authorities and the public.

Also, there are conditions for the successful implementation of such a program, including international support to get the project off to a good start, the stability of the program, and of course financing.

[MAROC SOIR] Mr. Berrada, you are the president of the Morocco Association of Atomic Engineers (AIGAM). Could you describe this association for us?

[Berrada] AIGAM was created in 1985. Its main purpose is to maintain and foster friendly and continuous exchange—both for intellectual and professional purposes—between members; to help its members by identifying, in every field of endeavor that involves nuclear energy, the best means of improving the technology; to contribute to the development and diffusion of useful information about atomic energy in Morocco; to facilitate circulation of ideas and exchange of information in nuclear domains; and finally to instigate and maintain contacts, within Morocco and abroad, with organizations whose activities have to do with nuclear engineering.

Its first priority was to survey all ongoing nuclear activities in the kingdom. This was completed in 1987, and a compendium on nuclear technologies used in Morocco was published in 1989. That survey brought us to the realization that there are more than 200 Moroccan nuclear specialists occupying highly responsible positions in various sectors. The task we have laid out for ourselves is to popularize the peaceful use of nuclear energy—more precisely, the radioactive isotopes produced by it—in order to dissipate the fears that we all have about radioactivity. These are understandable, insofar as radioactivity is invisible to the naked eye and is capable of producing real changes that will have observable effects only years later.

Our association, which includes nuclear engineers as well as researchers in nuclear physics and chemistry, is administered by a committee composed of 20 members that works to maintain the scientific character of the association and realize its objectives. Since its creation, it has been affiliated with GIM (Morocco Engineers Group), and it is an associate member of the European Nuclear Society, which includes 14 European countries; in 1991, our association signed a cooperation agreement with France's Atomic Energy Commission (CEA).

[MAROC SOIR] As a scientist, how do you rate nuclear medicine in Morocco?

[Berrada] Nuclear medicine in Morocco has taken a giant step forward. At the conclusion of an April 11 seminar on nuclear medicine organized with the help of CEA officials, we concluded that Morocco is not lagging behind in this field: On the contrary, the Oncology Institute of Rabat, the Ibn Sina cardiological radio-isotope service, and the Anoual clinic in Casablanca are very well equipped and on a par with European centers. However, we concluded that the number of specialized personnel employed in these centers is very small, given the large number of requests for examinations. Some patients are obliged to wait more than three months for a scintiscan.

We also noted an absence of regulations in this domain and requested urgent action to remedy this situation, to prevent a serious accident from occurring in the transport or manipulation of radioisotopic wastes. This regulatory code will soon see the light of day, thanks to the High Royal Directives instituting the National Energy Council, which is going to resolve all the pending issues, open up new horizons for the national policy of peaceful utilization of nuclear energy, and give new impetus to increased international cooperation in this domain.

[MAROC SOIR] Mr. Berrada, what projects is your association working on?

[Berrada] In years to come, we expect to organize international colloquia on:

- food and agriculture, with particular emphasis on vegetable and agrochemical production, mutation, animal husbandry, the American "jucilie bouchere" [translation unknown], fruit flies, tsetse flies;
- hydrology, evaluation of underground water sources, understanding their origin, monitoring surface water,

leakage and siltation in dams, measurement of flow rates;

- industry, especially the use of radio-isotopes as indicators, utilization of gammaradiography, electron beam procedures, autoradiography, neutrography;
- geology, geochemistry, geophysics and dating;
- the environment, to get precise information on quantities and locations of pollutants, causes of pollution, remedies, etc.

As you can see, Mr. Guennoun, there is much to do.

[MAROC SOIR] What would you like to say to the public?

[Berrada] I would say that our association is ready to organize all these events in order to popularize the use of "atoms for peace." It is doing this out of good will, in the general interest, and above all for the advance of science. It deserves to be encouraged and supported, morally much more than financially. I would like to take this opportunity to thank the honorary members of AIGAM who give us their support, as well as your newspaper, MAROC SOIR,

in particular, and the national press in general, which help us communicate to the public.

We note that Mr. Mekki Berrada Abdelhamid was born on 20 September 1933 in Casablanca. He is married and the father of two children. He has certificates in electric and mechanical engineering from the Special School for Mechanics and Electricity in Paris (class of 1959). He was also certified as a nuclear engineer by the Saclay National Institute of Nuclear Sciences and Technologies in Paris (class of 1960).

He joined ONE on 1 October 1960 as an operations engineer for medium- and high-tension lines. He subsequently served as chief of the hydraulic production service, deputy director of production and transport, and director of production and transport. Since 1970 he has served as deputy general director of ONE.

In 1967 Mr. Berrada was decorated with the Ouissam Errida (exceptional class), and in March 1986 he received the Ouissam El Arch (rank of chevalier). In February 1988, the French Government named him an officer of the National Order of Merit.

Proposals on U.S., Russian Nuclear Elimination

*PM2005135992 Moscow ROSSIYSKIYE VESTI
in Russian No. 10 (56), 15 May 92 p 2*

["Expert's Opinion" article by retired Major General Vladimir Belous, senior scientific associate of the Center for Strategic Studies and RAU-Corporation expert: "The Nuclear Bomb's Funeral. The Elimination of Nuclear Warheads Appears as Complex as Their Development"]

[Text] Russia and the United States must decommission and eliminate thousands of warheads. According to data from the Stockholm International Peace Research Institute (SIPRI), the U.S. tactical nuclear forces number 7,147 weapons [boyezaryad], and the corresponding CIS forces number 11,305. In the event of their commitments being honored, the United States will be left with 1,800 aviation bombs in service, and Russia with 3,100. Thus Russia will have to destroy about 8,000 tactical warheads and the United States about 5,500. Taking into account the strategic munitions which have to be eliminated under the START Treaty, each side will have to dismantle more than 10,000 weapons.

In this process, the eliminators will have to tackle devices with an exceptionally high degree of potential danger, and this will require the use of specialized equipment, comprehensively tested technology, high standards of production, and strictest compliance with safety requirements. This will make it necessary to develop a special enterprise or a major branch of the plant where obsolete munitions are now being dismantled.

According to estimates by eminent U.S. nuclear physicist T. Taylor, the daily throughput of such a plant will not exceed six to eight warheads per 24 hours. The cost of constructing the plant and of transporting and dismantling nuclear warheads will amount to about \$2 billion.

According to estimates by U.S. experts, by the late eighties each side's warheads contained about 100 tonnes of plutonium and 500 tonnes of highly enriched uranium.

Technically speaking, the task of utilizing weapons-grade uranium (containing more than 90 percent uranium-235) is relatively simple to solve by diluting it with natural uranium down to a 3-5 percent concentration. The resultant material provides fuel for nuclear power station [AES] reactors. The utilization of weapons-grade uranium for these purposes could ultimately yield a considerable economic effect, but initially it would require solid expenditure on the development of new production units. Russia's current stocks of uranium needed for AES reactors will make it possible to release onto the world market the uranium extracted from weapons—once it has been depleted, of course. But the market is dominated by the United States, which supplies about 50 percent of the total volume of uranium sold each year. The former USSR accounts for about 6-7 percent of the uranium market, even though its share of confirmed uranium reserves in the world accounts for 45 percent. The United States, together with two European consortiums, is trying to curb Russia's uranium sales potential. False reports on embezzlement and illegal export of fissile materials outside Russia, which

periodically appear in the foreign press, are meant to sow mistrust and to prevent a consolidation of Russia's positions in the world market.

But, the utilization of plutonium presents the most complex scientific and technical problem. One of the ways to utilize it is to mix it with natural uranium and subsequently produce fuel elements for AES reactors. But the development of industrial AES's operating on such fuel also presents certain difficulties due to the complexity of controlling such a reactor's operations.

At present, neither the United States nor Russia has industrial reactors operating on plutonium. There are, however, research reactors and power plant reactors operating on plutonium fuel.

Other proposals have also been made regarding the future of weapons-grade plutonium. In particular, it is proposed to mix the plutonium with nuclear reactors' radioactive waste and to subsequently entomb it in special depositories. But this way of eliminating this expensive substance is inexpedient both economically and ecologically. It must be borne in mind that the period of plutonium's half-decay is 24,000 years, and consequently we will be leaving the solution of this problem to many generations of our offspring.

Another proposal envisages the destruction of munitions containing plutonium by using a nuclear charge explosion in a special cave dug at great depth. Under the effect of high temperature, this will produce a destruction of weapons, partial fission of fissile materials, and subsequent vitrification of the entire melted-down radioactive mass.

Proposals have even been made to fly the plutonium beyond the solar system using powerful booster rockets.

At present, however, the most preferable method is to develop special facilities to store plutonium under strict international verification. At the same time, it is necessary to pool the efforts by scientists from the world's leading countries to elaborate methods for its utilization and develop reliable models of industrial reactors using plutonium as fuel.

IZVESTIYA on U.S. Sub's Alleged Nuclear Recovery**Downed Plane Reportedly Carried Bombs**

*924P0136A Moscow IZVESTIYA in Russian
13 May 92 Morning Edition p 7*

[Interview with Rear Admiral Anatoliy Shtyrov by Nikolay Burbyga, IZVESTIYA; place and date not given: "How Our People Gave Two Nuclear Bombs to the Americans as a 'Present,' and How the Japanese Facilitated This"]

[Text] This episode, which has never been ultimately figured out, occurred in 1976; it dates back to the era of harsh confrontation between two superpowers—the United States and the USSR. A Soviet strategic bomber on air combat

patrol had an accident and crashed into the water. There were nuclear weapons on board the bomber. What happened to them afterward?

We approached a person who was privy to this episode, and asked him to discuss this.

At the time, Rear Admiral Anatoliy Shtyrov held the position of chief of one of the key directorates of the staff of the Pacific Fleet.

Shtyrov said: "The fleet was not informed about our strategic bomber crashing in the Sea of Okhotsk. Since Moscow did not set this task, we did not engage in a search in the estimated area of the loss of the plane. I came upon the aircraft by chance. As a former submariner in charge of the work of analysts in my department, I noted a quite routine report to the effect that the American submarine Grayback had arrived at the Yokosuka naval base, along with the commander in chief of the U.S. Pacific Fleet, who attended a ceremony to decorate the crew of the submarine with orders and medals. A total of 67 people had been decorated, which amounted to 90 percent of the crew members. If we take into account the fact that the Yanks are moderate with combat decorations, that they do not give them out lightheartedly, and that "anniversary award showers" are not a tradition there, this immediately begged the following question: How outstanding would the accomplishment have been?

As a former submariner, I was well aware that in 1967 a U.S. submarine, perhaps the same Grayback, had stolen two inertly loaded state-of-the-art sea mines from an area to the south of Russkiy Island in the Bay of Peter the Great. The mines were placed during a period when the fleet was inspected by the Main Inspectorate of the Ministry of Defense. Two months later, these mines ended up in New York.

Many years later, it became known that the U.S. Navy successfully used its submarines in the extensive operation "Ivy Bells," which involved the attachment of eavesdropping devices to underwater communications cables in the Sea of Okhotsk and other seas and their retrieval.

It was also known that the Grayback was not a regular attack or general-purpose submarine, but rather a special-purpose one. It was converted from a submarine carrying cruise missiles into a special submarine for reconnaissance missions and raids. This is why I called in an officer with a chronological readout analyzing the cyclical use of the Grayback submarine. It turned out that the submarine had dropped out of our field of vision for 25 days. Where did it go? According to our data, this submarine had not "left tracks" in Vietnam; nor had it appeared along the coast of China and North Korea. Only repeated processing of intercepted radio traffic from the Northern Sector of the Japanese Air Defense System SAGE helped us guess what was going on. The Japanese Air Defense detected the sudden disappearance of an air target to the east of the coast of southern Sakhalin. Processing yielded the time, bearing, and distance to the air target which had disappeared. Simple calculations on the map indicated that the plane came down in Prostor Bay, 20 miles away from a

deserted shore. The depths in the area are uniform, up to 40 meters, and the floor consists of dense, silty sand.

Based on all this, it was concluded that information about "Ivan's" strategic bomber which had crashed was graciously communicated by the Japanese to the U.S. Navy command in Japan. The Yanks, being men of action, certainly went for the idea of examining the plane resting on the floor and borrowing what "was of interest to them."

[Burbyga] How do you know that there were nuclear weapons on board the plane?

[Shtyrov] I got in touch with the staff of strategic aviation on a secure line. We had approximately the following conversation: "Was the lost plane yours?" "Unfortunately, yes." "Do you confirm the time and the place?" "Yes." "Did you have 'red heads' on board?"—this is how nuclear weapons were referred to in the slang of staff officers. "We did." "How many?" "Two."

[Burbyga] What happened later, when you learned about the episode involving the snatching of our nuclear bombs?

[Shtyrov] After processing all the data, preparing a map, a chronology of events, and a written substantiation, and drafting an encrypted message to the commander in chief of the Navy, I asked the commander of the Pacific Fleet to receive me for a confidential report. Admiral V. Maslov received me. I remember the content of my report to this day. I reported: "Approximately one month ago, U.S. special services carried out a covert operation to examine our strategic bomber which came down in Prostor Bay, using the special submarine Grayback. There were two nuclear bombs on board the plane. Here is a substantiation and a draft report to Moscow."

The fleet commander looked at the map and the chronology for a long time. Then he asked: "So, you want me to report this to Moscow?" I answered: "Yes."

He moved the papers away in silence. I could clearly read this in eyes: "So, I am supposed to report this and be called on the carpet? The plane is not mine all right, but the sea is!...."

I silently gathered up the documents and left.

Japan's Role, Inconsistencies Eyed

924P0139A Moscow IZVESTIYA in Russian
15 May 92 Morning Edition pp 1, 6

[Article by Sergey Agafonov, Nikolay Burbyga, and Andrey Illesh, IZVESTIYA: "International Scandal Around the Nuclear Bombs from the Bottom of the Sea of Okhotsk"]

[Text] IZVESTIYA (No. 110) published an article under the headline "How Our People Gave Two Nuclear Bombs to the Americans as a 'Present,' and How the Japanese Facilitated This." The article dealt with events that took place in 1976. Rear Admiral Anatoliy Shtyrov was at that time one of the top officers in the staff of the Pacific Fleet. He informed our IZVESTIYA correspondent about a sensational fact: the crash of a Soviet strategic bomber on air combat patrol carrying nuclear weapons...

According to this expert, the American submarine Grayback managed to be the first to arrive at the location in the Sea of Okhotsk where the Soviet strategic bomber had crashed. It was able to recover from the sea bottom the Soviet nuclear weapons—two atomic bombs. That was facilitated by the fact that the Japanese quietly cooperated with the Americans in this operation, and Moscow did not task the high command of the Pacific Fleet with a search for its own strategic bomber(!). At that time Anatoliy Shtyrov used the help of the Pacific Fleet special services to conduct his own investigation; then he wrote up an appropriate report and sent it to his commanders. Admiral V. Maslov, commander in chief, listened to Shtyrov and took no action. The tragedy thus remained secret to the public until the day our article was published.

Japan was the first to react to the IZVESTIYA item. The Japan Defense Agency denied the IZVESTIYA assertion that "in 1976 the Armed Forces of this country helped the United States in the recovery of two nuclear bombs; the bombs were found on board the Soviet bomber that crashed into the Pacific east of South Sakhalin. The deputy director general of the Agency, Akira Hiyoshi, and Air Force Chief of Staff Akio Suzuki emphasized the fact that this was the first time they had heard about the incident."

The next message came from Washington. We quote: "I have nothing to tell you with respect to this issue," was the answer from U.S. Department of Defense representative G. Hartung to the ITAR-TASS correspondent's inquiry about the reaction of the American military agency to the IZVESTIYA article. "I have checked into your inquiry and I have nothing to say about it," the Pentagon spokesman added. In our opinion, this is circumstantial proof that the newspaper item was correct, because our article went into considerable detail about the crew award ceremony on board the Grayback submarine soon after the crash of the Soviet bomber in the Sea of Okhotsk, and about what operations this submarine could have conducted at that time and where.

The KYODO TSUSHIN agency conducted its own mini-investigation in Japan after the publication of the IZVESTIYA article, the results of which are now the center of attention of the Japanese press.

Local commentators note the fact that IZVESTIYA is not the kind of publication to try and dig up a sensation just for the fun of it; they have asked some prominent Japanese military officials to add to the published story.

The official responses run as follows:

- Hirokazu Samejima held the post of commander of the Joint Chiefs of Staff Committee in the Japanese "Self-Defense Forces" in 1976. He said that he did not remember an incident with a Soviet nuclear bomber taking place 16 years ago. Samejima also doubts that an American submarine would have dared such a risky operation as a removal of nuclear bombs from a crashed plane in the immediate vicinity of the Soviet border.
- Eiichi Sekikawa, one of the leading civil experts on aviation affairs, emphasized the fact that the Japanese

"Self-Defense Forces" have a major radar complex in operation in the north of Hokkaido, in the Nemuro area. This radar complex can "cover" huge expanses, and the IZVESTIYA article sounds convincing from this point of view alone. "I doubt," said Sekikawa, "that an American submarine could 'remove' nuclear weapons from a Soviet bomber, but as for the incident itself, the chances are quite high that it could have taken place in the former USSR."

The quoted Japanese responses may lead us to at least two conclusions: First, there are differences in how the incident was viewed by military and civilian representatives; secondly, most doubts revolve around the nuclear bomb removal operations and not around the incident itself. If we assume that the incident did occur under such circumstances as described by IZVESTIYA, then we have one version of it which can explain both the bad memory of the Japanese military and the doubts about the "underwater looting" of nuclear arms.

Well, let us assume that the Americans managed to remove the "cargo" from the crashed plane. What would their actions be after that? Naturally, they had to stop at some port to unload this "cargo." We could suppose that the submarine headed for a continental Navy base in the United States, but it is doubtful that the Americans would carry this "catch" across the ocean, as this would take a dangerously long time. Most probably they looked for a closer port, and here Japan was the only "candidate." Let us now return to the Japanese military; had they acknowledged the incident, it would be easy to check which American submarines visited which Japanese ports at any given time. A submarine from the "Okhotsk patrol" would have been the one we were looking for. But it is common knowledge that Japan is operating "on three nonnuclear principles"—it will not have, produce, or allow nuclear arms on its territory. With this in mind, no official will ever "remember" an old episode or will "doubt" its details, so that he does not put himself and his superiors on the spot.

This version contains too many "ifs," of course, to be accepted as the fundamental one. But it cannot be totally discarded either. Judging by appearances, however, the first official responses from Japan are not the last.

As you can see, making public the story of a crashed Soviet bomber that was carrying nuclear bombs is an event of considerable importance for the whole world. IZVESTIYA hopes to obtain some information from official military sources which will allow it to shed additional light on this incident. As soon as we receive such data we will publish it. We hope that it will then become clear what happened to the two Soviet nuclear bombs.

More on U.S. Sanctions on Rocket Sales To India

'Cloud' in Relations

924A1150A Moscow ROSSIYSKAYA GAZETA
in Russian 13 May 92 p 1

[Article by Aleksey Bausin under the "Commentary" rubric: "But We Still Make Rockets"]

[Text] A tiny cloud has appeared in the seemingly cloudless skies of Russian-American relations. The United States has imposed sanctions against Glavkosmos [Main Administration for the Development and Use of Space Technology for the National Economy and Science] in connection with the agreement on the sale of rocket engines to India. Why has this deal evoked so negative a response in Washington?

The United States has long been voicing concern at the scale of India's program for the building of rocket systems. The Agni (fire) rocket with a range of approximately 2,000 km and capable of carrying a large payload was launched from the cosmodrome on the shore of the Indian Ocean in 1989. Whereas India's prime minister at this time called this launch a "great achievement" "for ensuring independence and security," a U.S. spokesman commented on this test as being "a very destabilizing turn of events." At that time, as now too, for that matter, the U.S. Administration brought considerable pressure to bear on Delhi for it to abandon launches of the Agni. This elicited a very sharp response from the Indian press. The newspaper THE TELEGRAPH wrote that India "will not be deflected from its chosen direction on account of the fact that several beady-eyed gentlemen in Washington have determined 'acceptable' bounds of our position in the world."

Indian officials believe that American politicians are failing to take into account the current potential threat to India's security. China, which in 1962 had a serious military conflict with this country, is a power with nuclear weapons and ballistic missiles. On the other hand, as of 1947, when India and Pakistan gained independence from the British Crown, three large-scale armed conflicts have erupted between these states. In addition, Islamabad has an atomic bomb "in the basement," as they say. The possibility of the creation on India's western borders of a fundamentalist Islamic bloc incorporating Pakistan, Iran, Afghanistan, and Kazakhstan is even causing the Indian leadership a headache.

Regardless of the kind of arguments presented in support of the acquisition of nuclear technology, the number of "little boys with big sticks" is constantly growing. According to CIA estimates, 15 Third World states will have ballistic missiles by the year 2000. What this could lead to was graphically demonstrated by the so-called "war of the cities" at the time of the 1980-1988 Iran-Iraq conflict. The antagonists fired against one another more than 1,000 ballistic missiles, mainly Soviet-made. These attacks caused a tremendous number of casualties among the peaceful population. Considering the fact that together with the proliferation of the techniques of the manufacture of nuclear weapons chemical and nuclear arms also are becoming increasingly popular among the developing countries, it is clear what the world community could be encountering in the very near future.

Attempts to bring the proliferation of missile arms under international control have been made repeatedly. In 1987, the United States and its allies signed a treaty on the

control of exports of equipment and missiles to countries of the Third World. Russia did not sign this agreement, but adheres to its provisions.

In the dispute concerning supplies of rocket engines, Russia occupies a tough position and has no intention of yielding to outside pressure. As an employee of Glavkosmos maintains, the equipment which will be supplied to India, worth \$400 million, according to the terms of this contract, cannot be used for military purposes, which, naturally, means that it does not come under the agreement on control of the proliferation of missile technology. Preparation for the launch of the stage of the rocket which sparked this whole business would take approximately 90 days, which in fact, precludes the possibility of its military application. Nonetheless, the Russian side agreed that an independent international commission of experts make its evaluation of this deal.

It would seem unlikely, however, that the findings of any commission, even the most independent and international, would induce the United States to soften its position, primarily because the U.S. Administration is endeavoring to protect its industry against competition. The monopoly position of France and the United States on the world space technology market brings them in very big income. Imposing restrictions on the proliferation of missile technology in the developing countries, Washington is thereby in fact, reducing to nothing, the possibilities of the development of national space programs there. Although, of course, any space rocket may be used as a means of deterring one's neighbors.

In examining the present Russian-American conflict mention has to be made of one serious problem, whose existence largely explains the United States' negative response to the deal between Russia and India. The American military-industrial complex, aerospace industry included, is now actively expanding its presence on the international market since the volume of orders on the part of the national defense department is shrinking as a consequence of the reduction in the overall tension in the world. At the end of this April, the Bush administration, under pressure from defense industry, lifted the ban on the sale of a large quantity of American technology used for military purposes to other countries. These also included missile technology and products previously sold only to the Pentagon. According to the administration's estimates, this step will provide American military manufacturers with up to \$3 billion profit.

But, as is known, there is no love for competitors on the market, the arms market included. Supplies of arms and space technology to the Southeast Asia region are strictly controlled by American companies. True, the Indian market has hitherto been closed to them virtually since India's main partner in this delicate sphere was the Soviet Union. Naturally, availing itself of the present situation in the CIS, America's arms manufacturers are endeavoring to squeeze their Russian competitors from the Hindustan peninsula.

As yet it is clear merely that in the future also the interests of Russia and the United States as arms manufacturers will come into conflict with one other repeatedly. After all, Russia's military-industrial complex is today actively endeavoring to conquer new international markets in order to earn the hard currency it so sorely needs both for conversion and simply for its physical survival.

U.S. Advises Launch Suspension

*LD1705124292 Moscow ITAR-TASS in English
1222 GMT 17 May 92*

[By ITAR-TASS correspondent Boris Zaytsev]

[Text] New Delhi May 17 TASS—Owing to U.S. actions, the launch of an Indian Insat-PA communications satellite by a booster rocket made by the West European consortium Arianespace from Kourou cosmodrome in French Guiana is in jeopardy.

The management of the Arianespace received a U.S. State Department notification advising it to suspend the launch of the satellite in view of the application of U.S. Administration sanctions against the Indian Space Research Organisation (ISRO), the SUNDAY MAIL newspaper reports today.

Sanctions are known to have also been applied against the Russian Glavkosmos space agency. The two organisations have been "penalised" for their firmness as regards a deal for the delivery of cryogenic (liquid hydrogen) engines for space booster rockets to India.

If the launch of the Insat-PA satellite, which is to replace the Insat-1B satellite, is cancelled, India's satellite communications capability may be considerably undercut, local experts point out. The years of efforts and large funds spent on the development of the Insat-PA would prove in vain.

Meanwhile, according to reports reaching here today from Bangalore, Karnataka, ISRO specialists today began preparations for next week's launch of their own booster rocket of ASLV series from the Cosmodrome at Sriharikota.

It is clear from reports that the ASLV, 24 metres long, is a 40-tonne booster rocket which is capable of putting into a low-earth orbit a satellite weighing 150 kg.

U.S. Motives Questioned

*PM1905104992 Moscow KRASNAYA ZVEZDA
in Russian 19 May 92 p 3*

[Article by Major E. Fedoseyev: "How, as the Saying Goes, You Make an Elephant out of a Fly, and then Steak a la Washington out of the Elephant; or How the United States Tackles Difficult International Problems"]

[Text] Political commentators and specialists have been trying to work out in recent days who is right in the dispute which has flared up over the sale of rocket motors to the Indian Space Research Organization [ISRO] by Glavkosmos [Main Administration for the Development and Use

of Space Technology for the National Economy and Scientific Research]. Articles of the agreement on the nonproliferation of rocket technology have been quoted, statements by former and present officials of ours cited, and so forth, and so forth. It might appear that we are not right in purely formal terms.

However, everything turns out to be much simpler: It is the person who has most rights who is right, or to put it better, who has most strength. The dispute continues unabated about how the United States expressed a readiness to supply India with its own rocket technology if Delhi agreed to meet a number of conditions. Such an initiative, as ENI [as transliterated] reported from Washington, citing diplomatic sources, is contained in a message from U.S. Secretary of State James Baker to Indian Prime Minister P.V. Narasimha Rao. The United States has demanded, in particular, that India should subscribe, in exchange for the technology, to the Treaty on the Nonproliferation of Nuclear Weapons, which Delhi regards as discriminating against it and categorically refuses to sign. Another Washington desideratum is that the Indians scale down their own rocket program, since, in the American side's opinion, its achievements could be directed toward both peaceful and military ends.

OK, at first glance, the United States is pursuing the noble aim of preventing the spread of nuclear weapons in the world and keeping dangerous technologies under control. However, that is just on the surface. Behind all these American administration actions looms the shape of the not-so-celebrated U.S. military-industrial complex, going all out to break into the highly desirable Indian arms market and squeeze out Russia, which has been there too long. Such a situation also benefits the political leadership in Washington, since it can use arms supplies to put pressure on Indian politicians.

You can see the rationale behind the dispute: The Russian-Indian space deal harms the interests of the United States, which has no desire at all to bid farewell to its world leadership monopoly. And the logic of such American leadership is simple: Might is right.

Delhi Expresses 'Astonishment'

*924A1169A Moscow IZVESTIYA in Russian
15 May 92 Morning Edition p 6*

[Article by Nikolay Paklin: "Delhi Attempting To Avoid a Major Conflict With the United States"]

[Text] Delhi—The belief that the "war" declared by the U.S. Administration on the two parties to the rocket deal—the Indian Space Research Organization and our Glavkosmos [Main Administration for the Development and Use of Space Technology for the National Economy and Science]—is serious and for the long term, is maturing in India. India's newspapers have assessed the appeal by U.S. State Department spokesman M. Tutwiler to the other parties to the international agreement on the nonproliferation of missile technology to abide by the "rules of the game" as an indirect invitation for them to subscribe to the American sanctions.

However, Western diplomats in Delhi are expressing doubt that their countries will follow the United States' example. "France is not fond of resorting to sanctions against others, at America's prompting even less," a high-ranking French diplomat told our correspondent.

Professor U.R. Rao, leader of India's space program, expressed his "astonishment" at the decision of Washington, which is the "champion of free enterprise and competition." He confirmed that India's space program has a purely peaceful focus and that its purpose is first and foremost to contribute to the development of the country's agriculture and the expansion of the educational system. According to U.R. Rao, this decision appears all the more surprising in that the United States itself has for 25 years been cooperating actively with India in the execution of its space program. U.R. Rao believes that the crux of the matter is the competition between Glavkosmos and American firms for India's space market. He recalled that the American General Dynamics corporation, with which the Indian Space Research Organization had originally negotiated, had been asking a price for the cryogenic rocket engines three times higher than that of Glavkosmos.

But U.R. Rao's assertions are vulnerable. To judge by the statements of the United States, the U.S. Administration is opposed not to India's space program, but to the possibility of the cryogenic rocket engines being used to create Indian ballistic missiles. India's newspapers have reported, incidentally, that at the end of May and beginning of June, India will once again carry out a test launch of its first ballistic missile—the Agni.

The United States' position on this issue is highly consistent. For the past eight years, Washington has refrained from exporting to India any missile technology whatever. The United States links the development of ballistic missiles in India with the implementation of its nuclear program. R. Gates, who has just become director of the CIA, has called India together with Pakistan "a model of a country contributing to nuclear proliferation." "Both India and Pakistan already possess nuclear weapons and are implementing a program of the creation of ballistic missiles," he declared before members of a house committee. "And these two countries have recently been attempting to acquire chemical weapons."

What will the Indian Government's official response to Washington's decision be? In the opinion of political observers, very muted. There is talk in Delhi to the effect that the visit to the United States of Indian Finance Minister M. Singh, scheduled for the start of June, will be postponed. This will be done to satisfy Indian members of parliament who have taken umbrage at the "infringement of the country's national sovereignty." The influential TIMES OF INDIA observes that, following the disintegration of the USSR, India is extremely interested in an improvement in Indian-American relations.

Delhi is now following Moscow's position very closely. It cannot be ruled out that there would be a sigh of relief here if our Glavkosmos were to be the first to give up the rocket deal. Indian scientists and specialists assure us that they

are capable of creating their own cryogenic rocket engines, although this would entail substantial material costs.

India's Pawar on 'Interference'

BK1805151992 Delhi All India Radio Network
in English 1430 GMT 18 May 92

[Text] Transfer of rocket technology to India will continue unimpeded. This was disclosed by the defense minister, Mr. Sharad Pawar, at INS [Indian naval ship] Valsura in Jamnagar today. He reiterated that since the technology is being used exclusively for peaceful purposes, the high-handed interference of certain countries is questionable.

Addressing the gathering, Mr. Pawar urged the Indian Navy to give importance to developing indigenous technology. The defense minister is in Jamnagar in connection with the golden jubilee celebration of INS Valsura.

Russia Gets 'Full Blast'

BK2005044692 Delhi All India Radio Network
in English 0245 GMT 20 May 92

[Commentary by Dr. B.P. Dutt, former pro vice chancellor of Delhi University: "Moscow's Handling of U.S. Pressures"]

[Text] Perhaps even more than India, Russia felt the full blast of the American pressure to get its \$200 million rocket deal with India canceled. The Americans knew and the Russians realized too soon enough that the issue had many wider dimensions than the simple question of an agreement on transfer of missile technology to India in an area in which its military use is highly problematic.

The issue really related to the kind of world order that Washington wanted to create and Russia's place in it. There were many persons in the United States and in Russia too who naively believed that Moscow could just be conveniently fitted in as a junior and compliant partner of Washington and that the immediate and formidable economic problems of Russia requiring large-scale Western assistance would oblige Russia to fall in line as soon as the Americans raised their eyebrows. They were forgetting both history and geography. The Russians themselves have been rather painfully realizing that all their interests and needs are not necessarily totally identical with those of the United States.

There can be no doubt and we should not fool ourselves into believing that Russian need for Western capital and financial assistance is not paramount at present. Equally, that Russia wants to move away from a centralized planning system and adopt a market-oriented economy. The Russian authorities are taking various highly unpalatable decisions in this regard in order to move their economy forward. But that is not the end of the story. More and more Moscow is finding out that it has to draw a line somewhere and that it has to protect its economic, commercial and political interests which can come into conflict with those of the United States. And the deal with India on

the transfer of technology for cryogenic rocket engine has perhaps precipitated this awareness and consequently the need to draw a line.

The American decision to slam sanctions on the Russian space agency, Glavkosmos, almost unilaterally, shocked Russian opinion and brought them down to the ground reality. The Russians protested that this technology had no worthwhile military application and that it did not violate the Missile Technology Control Regime and offered technical discussions for a scientific appraisal of the deal. Washington would have none of it and demanded that the deal be canceled. As the Russians came to discover the real issue was a potential for future commercial competition between Russia and the United States and that therefore they had to draw a line here. The assurance held out by the Russian state secretary, Mr. Gennadiy Burbulis, in India recently and Moscow's reiteration of its adherence to the deal with India testifies to the somewhat belated recognition that Moscow cannot run away from asserting its position where its important economic and geopolitical interests are concerned. We have to watch and see how in the future even while seeking assistance from the West and making fundamental changes in its political and economic system Russia strives to protect and ensure its interests and importance in the world community.

Russia Risks Aid Cutoff

927Q0163A Moscow IZVESTIYA in Russian

16 May 92 Morning Edition pp 1, 5

[Report by Yevgeniy Bay: "Russia Risks Being Left Without American Assistance Over the Sale of Rocket Engines to India"]

[Text] M. Tutwiler, official U.S. State Department spokesperson, declared on 14 May: The U.S. administration is working with Senator Joseph Biden at this time on clarification of the content of his amendment to the bill on aid to Russia.

The day before, 13 May, the key Senate Foreign Relations Committee opposed economic assistance being granted to Russia if Moscow goes ahead with the supply to India of rocket engines. We would note that it voted unanimously 19:0 and raised several important conditions on the \$24 billion aid package being granted Russia.

While talk continues in Moscow as to the expediency of the sale of this type of rocket engine or the other to India, and government spokesmen angrily fulminate against representatives of the press for allegedly "inflaming passions" (only Glavkosmos, the officials say, not all of Russia, is threatened with sanctions), the "lack of mutual understanding" between Russia and the United States in connection with the rocket contract is threatening to develop into a serious conflict which could cancel out what the Ye. Gaydar reform government has managed to push through with such difficulty.

It is hard to say what our government officials are thinking on this subject (the more so in that we have not had an opportunity to hear their opinion following the Senate committee vote), but the Americans, by all accounts, are in

a very decisive frame of mind. Senator Joseph Biden declared at the hearings: "I hope Russia's leaders recognize that it would be wise on their part to suspend the rocket deal in the face of the danger of loss of the entire economic aid package." Commenting on the rocket contract, he observed: "This is not some two-bit deal. All this is very dangerous."

In this case it is not a question of whether our contract with India is indeed a violation of international agreements and of whether we should unconditionally submit to the Americans' demands, although the heart of the matter needs to be closely investigated. Of one thing there is no doubt: The United States is seriously worried, and we are compelled to affirm this concern.

IZVESTIYA warned more than a week ago, incidentally, that we were running the risk of losing American economic assistance overnight. Were such a thing to happen, this would be the result of an insufficiently considered policy and an inability to resolve such complex questions in a balanced and comprehensive fashion.

It has been noticed that in the past, two or three days (following the reassuring explanation that only Glavkosmos would be punished) not only has the press or television in fact not commented, but also not reported on a question of key significance for the fate of Russia. Is self-censorship taking effect once again? Are we afraid of offending the government?

Meanwhile, Ambassador Richard Armitage, coordinator of American assistance to the CIS states, who spoke at the hearings—although expressing concern in regards to the way in which J. Biden's amendment was worded—did not take exception to it in principle.

Of course, J. Biden's amendment, about which M. Tutwiler spoke 15 May, will be carefully analyzed by the administration, but the unanimous Senate committee vote makes it possible to assume with a greater or lesser degree of probability that the economic aid package to Russia will be blocked by the U.S. Congress.

Glazyev Comments

LD1905092892 Moscow ITAR-TASS in English

0904 GMT 19 May 92

[By ITAR-TASS correspondent Ivan Ivanov]

[Text] Moscow, May 19 TASS—First Deputy Minister for Foreign Economic Relations of the Russian Federation Sergiy Glazyev has described as "groundless political pressure" the U.S. Senate Foreign Relations Committee's intention to make economic aid to Russia dependent on Moscow's renunciation of a contract with India to supply the latter with technology for manufacturing cryogen engines.

He told ITAR-TASS that "the Russian side was aware of the interest displayed by American firms in the Indian market". "We have reasons to presume that this demand is a reflection of the pressure brought to bear on the U.S. Administration by major missile corporations," Glazyev said.

The deputy minister recalled that the Russian "Glavkosmos" (Space Administration) had won the contract from American and French firms as a result of a tender announced by India. He also stressed that "such engines are not used for military purposes and can by no means help boost the combat capacity of Indian missile forces. They serve to maneuver space vehicles on the orbit, vehicles that are being launched in India with purely civil purposes". "Therefore," Glazyev noted, "they should be regarded as parts of space vehicles." hence, they are not subject to international controls over the proliferation of missile technologies.

According to Glazyev, Russia had repeatedly declared its readiness to submit the contract to international expert examination "which would give it an unbiased and trustworthy evaluation, would decide whether the deal is subject to controls over the proliferation of missile technologies or not". "However," Glazyev noted, "an American delegation, which was in Moscow at the end of April, carefully avoided the possibility of such an expertise".

"As long as it is not held, Russia shall deem it illegal to prevent such an independent firm as 'Glavkosmos' from continuing the implementation of the contract to deliver missile technology to India. We now have no grounds to regard the deal as a violation of controls over the proliferation of missile technologies and to apply sanctions to 'Glavkosmos', which bears independent responsibility for its commercial activities," Glazyev stated.

More on Glazyev Position

*BK1905135692 Delhi All India Radio Network
in English 1230 GMT 19 May 92*

[Text] Moscow is to go ahead with the \$250 million contract signed by the Russian Space Agency, Glavkosmos, with the Indian Space Research Organization—ISRO—for the sale of cryogenic rocket engines for space launching vehicles. In an interview to the official Russian agency, ITAR-TASS, the first deputy minister for foreign trade, Mr. Sergey Glazyev, said there is no ground for the charge that the deal was a breach of Missile Technology Control Regime. He described the U.S. Senate Foreign Affairs Committee's bid to make economic aid to Russia dependent upon its refusal to provide India with rocket technology as groundless political pressure.

Glavkosmos Ignored Warning

*PM2005111592 Moscow IZVESTIYA in Russian
20 May 92 Morning Edition p 5*

[Article by Vladimir Skosyrev: "Foreign Ministry Warned Russian Government of Danger of Rocket Deal with India"]

[Text] The future of the Russian-Indian rocket contract continues to be discussed by politicians in Moscow, Delhi, and Washington. As I was able to ascertain in conversation with informed sources, the Glavkosmos [Main Administration for the Development and Use of Space Technology for the National Economy and Scientific Research] concluded a deal with the Indians in January of last year,

effectively in disregard of Foreign Ministry opinion. The foreign policy department warned that the deal would trigger a negative reaction from the United States and other Western powers, but the warning went unheeded.

As a result, Russia is today threatened with U.S. economic sanctions. It is not just Glavkosmos which could be punished, as a member of the Russian Government sought to assure us on television the other day, but rather, the entire Russian state. The result of the vote in the influential Senate Foreign Relations Committee is pretty telling in this respect. Let us recall that the senators, demonstrating rare unanimity, cast all 19 of their votes in favor of blocking American economic aid to Russia if it does not renounce the deal with India.

It is perfectly obvious that the value of the rocket contract (\$200-250 million) cannot be compared to the size of the expected U.S. aid—roughly \$4 billion, let alone the fact that, if the aid bill falters in the U.S. Congress, the whole \$24 billion Western aid package could be called into question by virtue of the American influence on international financial institutions like the World Bank.

You ask: Why, then, did Burbulis confirm in strong terms, Moscow's determination to fulfill the contract when he was in Delhi? Would it not have been more sensible not to tie his hands with categorical promises?

At first glance the answer seems obvious. The Russian state secretary, as is clear from his comments in Delhi, was thinking about the prestige of the state, which could not renege on its commitments to an old friend under pressure from its new and powerful partner.

Yes, concern for national prestige is a noble motive, and what patriotic heart will not rejoice that Russia, even at this very difficult time for it, refuses to be ordered about. The problem is that the contract with India, as people I spoke to in the Foreign Ministry pointed out, will, to a considerable extent, indeed be at variance with the regime governing control over the export of rocket technology, which first Gorbachev and then Yeltsin promised to respect.

You can reproach the United States as much as you like for wanting to retain its monopoly on civil satellite launches and deny Russia—with its idle rocket capacity—access to the international space market. The reproach may be justified. However, the fact is that the agreement struck with India in 1991 does not provide complete safeguards against possible use of the Russian technology in Indian missiles.

Our newspapers have already noted that the cryogenic booster motors involved are powered by liquid fuel and take roughly 90 days to prepare for launch, and for that reason are unfit for military purposes. However, on the other hand, as Foreign Ministry experts observe, the line dividing military and civilian technology is a delicate one. That is why the rocket control regime forbids participants from transmitting technology to other countries. This is precisely what is envisaged by the deal with India.

The question arises here: Were all the consequences of the contract considered with sufficient care? Hardly. The problem is that the contract was concluded at a time when the CPSU Central Committee instructions giving the defense complex the final say in many questions were still in force. Guided by these instructions, the Glavkosmos signed the contract without Foreign Ministry sanction. In other words, no prior interdepartmental expert appraisal was carried out.

There is no agreement regarding the Indian order in the Russian ruling structures today either. This is just the tip of the iceberg. Our military-industrial complex also objects to Russia's assuming commitments, along with the leading Western countries, to establish control over the export of other kinds of "sensitive technology" and equipment.

The position of the captains of our military-industrial complex is understandable here. Many military plants are in desperate straits. Hard currency and orders are needed to preserve jobs. Hence the argument put forward that Russia's adherence to export control regimes is inadvisable.

However, even if we take the purely economic aspect, the Glavkosmos case shows that trading in "sensitive technologies" will certainly result in the introduction of sanctions against Russia, that is, will do damage substantially in excess of the currency earnings brought by the deals. Moreover, we are bound to see that certain developing countries, particularly those with dictatorial regimes, want to possess nuclear, chemical, and biological weapons and delivery systems for them. Iraq is a case in point. A situation whereby the number of heavily armed states close to Russia's borders increased would surely not be in its national interests, would it?

It is clear that we have to keep in step with the developed countries of the world community in this sphere. As far as the deal with India is actually concerned, its fate does not, frankly, inspire optimism. I should like to be wrong, but I fear that Moscow will have to review its commitments to India.

Rocket Designer Defends Sale

*LD2005215892 Moscow Teleradiokompaniya
Ostankino Television First Program Network
in Russian 1700 GMT 20 May 92*

[Interview with Ye. P. Seleznev, "first deputy general designer", by correspondent S. Slipchenko at "the secret Chemical Machine Building Design Bureau in Kaliningrad near Moscow"; date not given; on the "Novosti" news-cast—recorded]

[Text] [Slipchenko] It is still called the Isayev Design Bureau. More than 100 rocket engines were developed here, a huge one which flew to Mars and a small one like this. All space vessels in orbit include engines from this design bureau. Motors for the flight from the Earth to the Moon were created here in the 1960's. Now, it was exactly this one which was sold to India and which has raised an absolute storm in America.

Can this engine be used in a military missile capable of carrying nuclear weapons?

[Seleznev] Let me tell you right away that this engine is a space engine. It operates in space. It was designed for space operating conditions. It cannot be used in the first stages of a carrier rocket. Its chief task is to ensure work in space conditions. This engine operates on cryogenic components, liquid oxygen and liquid hydrogen. The time that can be spent in orbit by a space vehicle with liquid oxygen and liquid hydrogen is limited because it is a very great problem to keep oxygen and hydrogen liquified for a long time.

[Slipchenko] You are going to supply parts for this motor from Russia. The materials from which parts for this motor are made are also from Russia. In this case will we be able to monitor, let us put it that way, Indian production of these engines?

[Seleznev] Our cooperation with India in the production of this engine will offer the possibility for such checking. A similar engine was offered to India by a French firm and a U.S. firm. India selected this engine.

[Slipchenko] In the teeth of the United States' position in the sphere of space decisions, India replied by supplying Cuba with ten thousand tonnes of rice. They seem to be saying: You impose an embargo in space and we reciprocate in other international affairs.

In brief, there is a U.S. political embargo on Russia's commercial competitiveness.

'Expert' Perceives No Violations

*PM1805115592 Moscow IZVESTIYA in Russian
15 May 92 Morning Edition p 5*

[Interview with Gennadiy Lednev, an independent expert, by Sergey Guk; place and date not given: "Rocket Engines for India: Moscow Has Violated No Agreements"—first paragraph is introduction]

[Text] That is the opinion of authority Gennadiy Lednev, an independent expert who has spent 25 years studying rocket and space technology in theory and practice. He took part in the Soviet-U.S. talks in Geneva on the nonproliferation of the arms race in space. His sphere of interests today includes the problems of strategic offensive arms and strategic stability, which is studying at the Institute of World Economy and International Relations. IZVESTIYA asked Gennadiy Lednev to explain how justified the U.S. sanctions against Glavkosmos [Main Administration for the Development and Use of Space Technology for the National Economy and Scientific Research] are. Have we really violated something?

[Lednev] In principle we have violated nothing since we have not signed the intergovernment agreement of the so-called "Seven" (United States, Britain, France, FRG, and the others) on the control of the proliferation of rocket technology. It contains the following restriction: If I am not mistaken, the rocket's payload should not be in excess of 500 kg and the range should not be in excess of 300 km.

Here we are violating agreements, but not our own agreements: Neither Russia nor the former Union nor India has assumed any commitments.

[Guk] One wonders whose technology is used on existing Indian rockets, whose parameters violate the "Seven's" ban?

[Lednev] There is a "mixed bag" there, of course: Some of the technology is Indian, some is imported. It is sometimes simpler to buy some technologies than to sweating over inventing them for oneself. Everyone does this.

[Guk] Then I cannot understand why there is nonetheless so much noise over this deal?

[Lednev] There are purely objective factors. Today we are not what we were before in the international arena. Against the background of the collapse taking place in all fields, our ambitions have diminished markedly. In addition, Russia is in need of American aid and not the other way round. That is why the rules of the game have also changed: Yesterday's adversaries could try to assign Moscow a new place in the world hierarchy. There is another factor: In order to survive, the enterprises of the military-industrial complex must be concerned for themselves. Our output on the world market, although it is competitive, does not surpass U.S. output in terms of quality. We can withstand competition only by using dumping prices. That is, we spoil commerce, which cannot fail to anger our competitor. Hence his reaction, albeit an inappropriate one.

[Guk] But the United States uses other arguments to justify the sanctions: Deliveries of Russian rocket engines—and this is technology with a dual application—could seriously destabilize the situation in Asia and give rise to a domino effect: Following India, other countries will try to buy rockets.

[Lednev] Of course, on a purely theoretical level, a rocket with our cryogenic engine could be fitted with a nuclear warhead. However, with the present level of rocket technology, it would not occur to anyone to use cryogenic engines for military purposes. The fuel used in them, compressed hydrogen and oxygen, requires the observance of very complicated safety measures and the slightest blunder could lead to an explosion. To put it more simply, when you have filled an engine with this compressed fuel it is best to launch the rocket immediately to avoid trouble. Incidentally, the fuel itself cannot be stored for long.

Somewhere in the mid-sixties there was an attempt in the USSR to create a combat rocket using oxygen-kerosine fuel. The testers dubbed it the most accurate rocket in the world: It would explode unfaillingly on the launchpad. There is no more point in buying cryogenic engines for military purposes than there is, for instance, in taking cans of food on a long journey which have passed their sell-by date when there are fresh cans to be had.

[Guk] Why is India buying them?

[Lednev] Because they are cheap. In addition cryogenic fuel has one advantage: It has a very high degree of

efficiency, thanks to which, the carrying capacity of the carrier rocket is drastically increased.

[Guk] Only the United States has opposed the deal, the other signatories to the agreement have been quiet. Why is that, do you think?

[Lednev] The market in rocket and space technology is monopolized by the Americans: They are in charge of "distribution," they dictate the trading rules. After all, this is not the first attempt to encroach on our interests. Why compete if it is simpler to prevent a rival from competing?

Proliferation Analyzed

*PM1805113992 Moscow IZVESTIYA in Russian
14 May 92 Morning Edition p 6*

[Article by Vladimir Trofimov, candidate of Historical Sciences of the Russian Foreign Ministry Legal Department under the "Opinion" rubric: "We Should Not Pass up on Military Orders"]

[Text] Russia's attempts to sell rocket engines to India have led to a certain tenseness in relations between Moscow and Washington. So who is right?

From the formal point of view, the Americans are currently in the right. Under Article 9 of the 1972 Treaty on the Limitation of Antiballistic Missile Systems, the signatories cannot transfer ABM systems or components thereof to other states. The treaty between the USSR and the United States on the Reduction and Limitation of Strategic Offensive Arms also concerns the overall issue of nonproliferation of live missiles. In June 1990, during his visit to the United States, M. Gorbachev finally signed the joint statement on questions of nonproliferation which committed the USSR, at least morally, to preventing the proliferation of live missiles and missile technologies. Will an international expert analysis be able to prove that our engines cannot be used for military purposes or that they are not powerful enough to enable the rocket to lift a payload of 500 kg or fly 300 km?

It would, however, probably be more sensible not to rely on this sort of expert analysis, since G. Burbulis is, of course, basically right on this question. The fact is that the problem of the nonproliferation of weapons is not as uncontentious as it may appear.

The attitude that the developed countries of the West and the United States in particular have to the issue of safeguarding international security is different from ours. Their main aim is to ensure the survival of civilization and the preservation of the international order, but strong-arm models—for example the system of the balance of forces—are used as means to achieve this. This presupposes a more extensive use of force than that envisaged by the UN Charter and the maintenance of regional military balances. In public, of course, nobody asserts this directly, but to satisfy yourself of the validity of this statement, all you have to do is drop by a library and, for example, read certain books by representatives of various U.S. Administrations.

We, however, are seriously continuing to build utopian constructs in international relations; and moreover, in the best traditions of stagnation, we believe that the maintenance of peace is more important than the survival of humanity, that disarmament leads directly to peace, and that it is possible to achieve this on a global scale, that it is possible to persuade all countries not to use force in international relations.

Any weapon has a dual character—it is not just a means of attack, but also a way of deterring attack. Therefore, the preservation of the balance of power is important both on the global and on the regional level. The main thing is what, to whom, how much to sell, or how we ourselves should disarm. Especially as there is no justification for not selling technologies when the purchaser is already capable of developing them himself. Nonproliferation measures are therefore gradual and not perpetual in character. Time passes, the situation changes, and such and such an embargo no longer makes sense. If we make a careful study of U.S. policy regarding compliance with the treaties they have signed in this area, the picture will be fairly convincing.

It is precisely in this key that the question should be put to the Americans—we should suggest to them that we mutually examine compliance with the relevant treaties, in particular the 1972 ABM Treaty. The score, to use the language of sport, will immediately come to 1:1, and subsequently we will have to decide in essence what the current balance of [word indistinct] in South Asia is, and how much money we must forfeit in order to build a democratic society by passing up on military orders.

Generally speaking, we need to have a more cautious attitude to proposals to conclude treaties in the sphere of nonproliferation and disarmament by comparing the level of development of the technologies, the general state of the economy, and also the way other countries do things.

Bush, Yeltsin Do Not Discuss Rocket Exports

*OW1505123192 Moscow INTERFAX in English
1123 GMT 15 May 92*

[Transmitted via KYODO]

[Text] During their telephone talk Boris Yeltsin and George Bush did not discuss the issue on Russian rocket technique deliveries to India. There is no basis for the statement that the presidents reached "an agreement to show good-will in expanding the markets for such kind of techniques on equal rights". A prominent employee of the Russian Foreign Ministry explained to "IF" [INTERFAX].

Japan To Send Experts to Nuclear Power Stations

To Promote Safety

*LD1605015592 Moscow ITAR-TASS in English
1534 GMT 15 May 92*

[By ITAR-TASS correspondent Vladimir Solntsev]

[Text] Tokyo May 15 TASS—The Japanese Government intends to send five groups of experts to the former Soviet Union and Eastern Europe to promote safety of nuclear power plants, Kanzo Tanigawa, chief of the Japanese scientific center told a news conference here on Friday [15 May].

After the accident at the Chernobyl nuclear power station and the economic recession in the former Soviet Union, scores of nuclear power stations on its territory as well as those built under Soviet pattern in Eastern Europe cause a great concern of the world public.

About two years ago the International Nuclear Energy Agency (IAEA) began to take measures to secure safe operation of old nuclear reactors, the Japanese KYODO TSUSHIN news agency said on Friday. The Japanese Government decided to allocate 155 million yens (over 1 million U.S. dollars) for the purpose from Japan's budget for the current fiscal year.

Besides the allocation, Tokyo decided to send its experts to nuclear power stations which have safety problems.

Japanese experts are expected to arrive at the Chernobyl nuclear power station in Ukraine, Kursk nuclear power station in Russia and three others, one of them in Hungary, to render technical assistance to their personnel.

May Build 'Testing Ground'

*LD1805174692 Kiev Radio Ukraine World Service
in English 0000 GMT 18 May 92*

[Text] The government of Japan intends to send to Ukraine this June-November a group of specialists to assist in the ensurance of the safety of Ukrainian nuclear power plants. The Japanese side proposes that an educational center be organized in Ukraine where power engineers operate in such stations to raise their qualifications. It is also probable, in case the government of Ukraine gives consent, that a testing ground will be built for testing the acting models of nuclear reactors from the West which are much more reliable than the sadly-known Chernobyl ones.

DPRK Envoy Gives Briefing on Nuclear Issues

*SK1705140992 Moscow Radio Moscow in Korean
1000 GMT 14 May 92*

[Report on news conference by Son Song-pil, DPRK ambassador to Russia to Russian reporters in Moscow, date not given; from the "Focus on Asia" program—passages within quotation marks are Son Song-pil recordings]

[Text] A news briefing for Russian reporters was held at the DPRK Embassy in Moscow.

Son Song-pil, DPRK ambassador extraordinary plenipotentiary to Russia, said at the briefing that the DPRK Foreign Ministry spokesman issued a statement some time ago. He said this statement pointed out that if all military bases in the ROK are opened up, the DPRK would open all its nuclear facilities to inspection. He continued.

"Our Republic submitted the initial inventory of nuclear materials and a detailed statement on nuclear facilities to the International Atomic Energy Agency [IAEA]. I will (?speak) about what is important for denuclearization of the Korean peninsula and what is necessary for (?implementing) the nuclear safeguards accord after our country's nuclear inspection issue is satisfactorily resolved.

We submitted the report on nuclear materials' inventory and the statement on nuclear facilities to the IAEA on 4 May. According to the nuclear safeguards accord, this report and statement are due by the end of May. However, we submitted them far ahead of schedule."

Son Song-pil, the DPRK Ambassador, pointed out that the North Korean side has reliable information about secret nuclear bases containing nuclear weapons in the ROK.

This information has been reported by publications in India, Libya, Romania, and Pakistan, and has been confirmed by DPRK military intelligence materials. Yet, the United States and the ROK (?raised questions) concerning technology used by North Korean technicians to develop nuclear weapons.

Ambassador Son Song-pil claimed that he has made it clear that there are no such (?materials) in his country's territory and (?requested) [words indistinct] possible means for inspection.

"Nuclear inspection of us by [word indistinct] and the issue of [word indistinct] are different issues. We said that we will accept nuclear inspection in accordance with the nuclear safeguards accord. We are preparing for this. I would like to advise some circles in the United States and Japan not to (?hinder) nuclear inspection, which is being smoothly conducted, by talking about an insufficient (?role), concealment, warning and so forth."

The DPRK ambassador then answered the Russian reporters' questions.

CIS To Control Strategic Forces, Nuclear Arms

LD1505211992 Moscow Russian Television Network in Russian 1900 GMT 15 May 92

[From the "Vesti" newscast]

[Text] A briefing of the CIS unified armed forces took place in Moscow today. It was announced at the briefing that, although the Russian armed forces envisage strategic nuclear forces, nuclear weapons will continue to remain under the control of the leadership of CIS troops. It will stay this way as long as Kazakhstan, Ukraine, and Byelarus remain nuclear powers.

Shaposhnikov Seeks Nuclear Republics Meeting

OW1805164992 Moscow INTERFAX in English 1605 GMT 18 May 92

[Transmitted via KYODO]

[Text] The commander-in-chief of the CIS Armed Forces Marshal Shaposhnikov is going to ask the leaders of Byelarus, Kazakhstan, Russia and Ukraine which have

nuclear weapons on their territories to immediately discuss the issue of the Soviet nuclear potential. Marshal Shaposhnikov had a meeting in Moscow with officers of the Uzin Air Forces regiment stationed in Ukraine and said that he would sign the appeal the same day.

The commander-in-chief believes that there are two options, either to recognize all CIS strategic arms agreements void and to tell the world there are four more nuclear powers, or to strictly observe the obligations assumed.

The commander-in-chief said he was going to invite the CIS defence ministers to a meeting on the nuclear issue in Moscow on May 26. The meeting will be held in the former Warsaw Treaty chief of staff headquarters in Leninskiy Prospect, because the building of the CIS chief of staff is to be handed over to the Russian Defence Ministry. "If no solution is found, I will have to appeal to the peoples of the CIS and to the world community", Marshal Shaposhnikov was quoted as saying.

Russia To Complete Withdrawal From Germany By 1994

OW1905152992 Moscow INTERFAX in English 1429 GMT 19 May 92

[Transmitted via KYODO]

[Text] The withdrawal of the Russian troops from Germany will be completed in 1994, as planned, Russian Defence Minister General Pavel Grachev announced in Moscow today. He confirmed that the Western Group which is being removed from Germany will constitute the nucleus of the Russian armed forces.

Grachev denied reports that Russia is planning to locate nuclear weapons in Uzbekistan and Kazakhstan and said that shortly Russia and Kazakhstan will sign an agreement regulating all questions pertaining to nuclear weapons. He also confirmed that control over the CIS Armed Forces' nuclear armaments is being exercised by Commander-in-Chief, Marshal Yevgeniy Shaposhnikov and assured journalists that such control was reliable.

Asked by IF [INTERFAX] about the talks concerning the Black Sea Fleet, Grachev said that "these talks will be quite lengthy if the sides do not come to the agreement that the fleet should belong to the CIS and be part of its armed forces". He said this will be fair even if the Crimea becomes independent.

He also said that the Russian troops will not be removed from the Kuril islands in the near future.

On May 20, the Russian defence minister will inform the Russian Security Council of the structure of the recently set-up defence ministry.

Commentary on Yeltsin's Biological Arms Decree

LD1505142592 Moscow Radio Moscow World Service in English 0810 GMT 15 May 92

[Commentary by Boris Belitskiy]

[Text] [Announcer] President Boris Yeltsin of Russia last month issued a decree on assuring the fulfillment of the country's international commitments in the field of biological weapons. Some details from our science correspondent, Boris Belitskiy.

The decree forbids drawing up or implementing military biological programs in violation of the international convention on this subject adopted back in 1972 and ratified by the Soviet Union three years later. Since then this is the first legal document in the country on these matters. Well, better late than never. Enforcement of the ban has now been assigned to a committee on conventional problems of chemical and biological warfare. The committee is directly under the president. Here is what we were told by the chairman of this committee, Dr. Anatoliy Kuntsevich.

Dr. Kuntsevich said that after the ratification of the international convention there were, legally speaking, violations of it in this country. Since there were no bans, research in this field continued. It continued even after 1975 when the USSR ratified the international convention. It was only in the mid-eighties that steps began to be taken to curtail these offensive programs. That was when preparations began for United Nations conferences on the problems of biological warfare.

But although the programs were gradually wound down, still there was no legal action on a total ban. This has come only now. The chairman of the presidential committee, Dr. Kuntsevich, confirmed that there are now no stockpiles of biological warfare agents in Russia. Indeed he explained that the agents that had been developed had a short storage life, which made stockpiling impossible. Actually there was laboratory research and the testing of the product of this research at the country's only proving ground for this purpose. All work at that proving ground has now been halted and the special purpose structures erected there are to be dismantled within a couple of years. I saw the specialized research facilities. They are now to be (?regeared) to serving civilian needs, such as the need for pharmaceuticals and to do basic research.

To prove this foreign experts have been invited to the recently top secret military facility. The foreign experts will be able to take part in evaluating the project and in formulating policies for converting military oriented biological work to civilian needs and working out (?the measures to improve this). Dr. Kuntsevich had this to say on the subject.

Dr. Kuntsevich said the presidential decree also requires that their committee draft proposals to extend openness, trust and international cooperation within the framework of the convention. The committee chairman says their proposals will call for a substantial change of the control mechanism, that it consists not of national groups acting separately but of mixed groups. International experts [word indistinct] it is also necessary to follow the trends of biological research and evaluate them from the standpoint of their potential for developing new types of warfare agents. Such a possibility must be ruled out.

Mikhaylov Outlines Russian Proliferation Status

*LD1905185792 Moscow ITAR-TASS in English
1811 GMT 19 May 92*

[By ITAR-TASS correspondent Valeriy Loskutov]

[Text] Oslo May 19 TASS— Russia is encouraging Western interest in Russian high technologies, excluding the proliferation of nuclear technologies.

Russia has not yet sold a single nuclear warhead or enriched uranium, Mikhaylov pointed out.

Mikhaylov said the Russian Government gives priority to the safety of nuclear power stations and reliable utilisation of nuclear waste formed as a result of dismantling nuclear plants.

A total of 17 billion U.S. dollars will be allocated to improve the nine active nuclear power stations. According to Mikhaylov, four nuclear reactors used exclusively for military purposes will be dismantled, two of them in 1992, and the other two in the near future.

According to the Norwegian Telegraph Agency, Mikhaylov did not conceal that Russia was continuing the production of nuclear warheads, but at the same time Mikhaylov pointed out that many more warheads are being dismantled than produced, and the production of enriched uranium was stopped.

As for the moratorium on nuclear tests in Novaya Zemlya, Mikhaylov said it can be extended till the end of this year and, perhaps, through the next year. Mikhaylov said that would depend on the results of bilateral talks between Russia and the United States.

However, a final decision on the moratorium will be adopted by Russian President Boris Yeltsin in October 1992, Mikhaylov said.

Mikhaylov noted the Russian Government was not planning to destroy chemical ammunition and radioactive waste by nuclear explosions. The nuclear test site in Novaya Zemlya is in the competence of the Russian Defence Ministry which can give permission to foreign experts to visit.

Mikhaylov believes Scandinavian experts may also receive permission to inspect the area.

Officials React to Ukraine's Retention of Forces

Nazarbayev Expresses 'Puzzlement'

*OW1805120692 Moscow INTERFAX in English
1051 GMT 18 May 92*

[Transmitted via KYODO]

[Text] President Nursultan Nazarbayev of Kazakhstan has declared puzzlement at the Ukraine's adoption of a number of legislative acts, virtually providing for the retention of nuclear forces on its territory. At a briefing in Moscow on Monday before flying off to the US, he voiced the view that such Kiev's actions meant that Ukraine was become a nuclear state. "That position is not understandable for me", Mr. Nazarbayev said.

In his words, only Russia should remain a nuclear state, in which case, nuclear weapons wouldn't spread, nor the Nuclear Weapons' Nonproliferation Treaty be breached.

About relations with Russia, Mr. Nazarbayev noted that Kazakhstan and Russia were military and political allies, and for this reason, we shall settle "the issue on making Kazakh soil available for common defence and for nuclear missiles' deployment on mutually advantageous terms". He also pointed out that he fully accepted the CIS Treaty, would implement that part of it which concerned Kazakhstan and, as a nonnuclear state, would join the Nuclear Weapons' Nonproliferation Treaty.

That position—Mr. Nazarbayev said—was outlined in the letter we sent with Boris Yeltsin to the US President George Bush on May 17th.

Shaposhnikov Seeks Explanation

MK2005085992 Moscow NEZAVISIMAYA GAZETA in Russian 19 May 92 p 2

[Report by Natalya Gorodetskaya: "Commander in Chief Shaposhnikov Left Without Official Identity and Does Not Know Who Is Going To Pay His Wages"]

[Text] In Shaposhnikov's opinion, this subject should be discussed in the future by the CIS heads of state who signed the Treaty on Collective Security. Admittedly, this treaty, the CIS Armed Forces commander in chief believes, is not specific enough, but it is good that the heads of state have "stopped being afraid of offending one another and have abandoned vague phrases." Now "it has become clear who wants the CIS to live and flourish so that the army is not dragged off into national compartments" (Karimov, Nazarbayev, and Yeltsin).

That was the assessment of the treaty signed in Tashkent that Yevgeniy Shaposhnikov, commander in chief of the CIS Armed Forces, gave at a meeting yesterday between journalists and 24 officers of the Strategic Nuclear Air Regiment of the long-range air division based in the Ukrainian city of Uzen. The regiment's officers, who have not taken the oath of allegiance to Ukraine, have come to Moscow to find out what is going to become of them. The division has switched to the administrative jurisdiction of Ukraine, but for the time being operational control seems to belong to the CIS command. Appointments and financing are carried out by Ukraine. If you have taken the republic's oath you are subordinate to Ukraine. But what if you have remained loyal to the old oath? To whom are you subordinate? Marshal Shaposhnikov has advised people not to obey any decrees until orders are received from the CIS command. He promised that airmen would then be found a place to serve in Russia. At present, however, it is unknown where this regiment is to be used. "The question of its jurisdiction has to be resolved first," Shaposhnikov stated.

The commander in chief has decided to write to the heads of the CIS nuclear states in connection with Kravchuk's decree on the administrative subordination of the strategic forces to Ukraine and has suggested to them that "Ukraine be obliged either to fulfill earlier commitments or else to

explain to the Commonwealth's peoples and the world community that the decisions are not going to be fulfilled." If these questions are not resolved Shaposhnikov plans to appeal to the peoples of the CIS.

At the moment, however, he explained, "when listening to the Ukrainian leaders any normal person gets the feeling that Ukraine joined the CIS to bury the Soviet Union more quickly and then bale out of the Commonwealth."

Baku Hosts Conference on Weapons Control

LD1305110692 Moscow Teleradiokompaniya Ostankino Television First Program Network in Russian 1700 GMT 12 May 92

[From the "Novosti" newscast]

[Text] A meeting of an international group of experts on controlling nuclear, bacteriological, chemical, and biological weapons was held in Baku today.

[Correspondent M. Mamedov] Specialists from countries of the Big Seven and Australia and representatives of the Azerbaijani Republic took part in the meeting. The main objective of the talks is to draw the attention of all the CIS republics to the need to sign international conventions which help in controlling all types of weapons of mass destruction.

The Azerbaijani side expressed its readiness to cooperate in this important question with all international organizations. At the same time, the experts' attention was drawn to the fact that armed Armenian formations are using chemical weapons in the mountainous area of Karabakh. Cyanide, a highly effective poisonous substance which has been banned from use throughout the world, has been discovered in shells fired on populated Azerbaijani areas. The foreign specialists were shown the results of research carried out by Baku scientists and other material evidence.

Shushkevich Notes Byelarus' Nuclear-Free Stance

LD1905143692 Moscow ITAR-TASS World Service in Russian 1315 GMT 19 May 92

[By BELTA-TASS correspondent]

[Text] Minsk, 19 May—Byelarus' firm intention to become a neutral, nuclear-free state was reaffirmed today by Stanislav Shushkevich, chairman of the Republic's Supreme Soviet, at a meeting in Minsk with representatives of the Council of Europe Committee on Relations with European Nonmember Countries. Byelarus "is the most militarized and nuclear state" per capita, he underlined. This situation has been imposed by the old military doctrine of the former USSR. Now Byelarus' parliament and government strictly adhere to a course of neutrality and freedom from nuclear weapons.

"There is but one way to this goal for us: the strictest compliance with all our undertakings, respect for international treaties and agreements, including those signed by the former Soviet Union," Stanislav Shushkevich stressed. He also mentioned that in fact Byelarus had removed all tactical nuclear weapons from its territory on 27 April.

Kazakhstan To 'Fully Comply' With START

Non-Nuclear Status Noted

*LD1805104192 Moscow ITAR-TASS in English
1019 GMT 18 May 92*

[Report by ITAR-TASS]

[Text] Moscow May 18 TASS—"We fully recognise the Strategic Arms Reduction Treaty (START) and we shall fully comply with the obligations the USSR assumed with regard to the United States," Kazakhstan's President Nursultan Nazarbayev said on Monday [18 May]. Heading for the United States on an official visit, he stopped over in Moscow on the way from Alma-Ata to Washington. He answered questions from reporters in Moscow Airport.

Nazarbayev also said that Kazakhstan joins the Nuclear Non-Proliferation Treaty as a non-nuclear state. "In his letter U.S. President George Bush has recently informed me that he accepts our proposal that Kazakhstan become a participant in the START process and in the negotiations on the further reduction of strategic offensive arms, ratify the START treaty on its own and present the instrument of ratification to the United States," Kazakhstan's president said.

Nazarbayev said that he met with Russian President Boris Yeltsin in Moscow on Sunday. Matters of foreign and home policy were discussed. "We agreed that after the fulfilment of the START treaty the question of further cuts in nuclear arms stationed in Kazakhstan's territory will be decided by Russia and Kazakhstan. "Russia is now Kazakhstan's military and political ally," Nazarbayev said. Answering a question, the Kazakh president said that "the matter of providing the Kazakh territory for the purpose of common defence and deployment of nuclear missiles will be decided on mutually advantageous terms."

Nazarbayev noted a constructive nature of the summit of the Commonwealth of Independent States (CIS) held in Tashkent last Friday. He noted particularly that the conclusion of the treaty on collective security by member-states of the Commonwealth of Independent States "will serve as a basis for our civilised unity, not separation." He said that the CIS countries that form their own armies will not be using them against each other. The parties to the treaty assume the obligation that if any one of them is subjected to aggression or is threatened with aggression, this will be regarded as an attack or the threat of attack against all of them. "We thus reassure our peoples and above all create a normal base for the further existence of the army," the Kazakh president said.

He also declared for creating coordinating bodies of the Commonwealth. "On the basis of decisions of heads of state an economic court is being formed to monitor the observance of obligations under treaty. We began working out the charter of the Commonwealth of Independent States. The Commonwealth is thus being consolidated," Nazarbayev said.

Dwelling on the purposes of his visit to the United States, the Kazakh president said he is not going to ask President

Bush for anything. "The only thing I intend to do is to tell American businessmen: come to Kazakhstan and work in conditions of mutual advantage," Nazarbayev said.

Reasons Cited

*LD1805082892 Moscow Radio Rossii Network
in Russian 0800 GMT 18 May 92*

[Text] Kazakhstan intends to join the treaty on nonproliferation of nuclear weapons and to become a nonnuclear state, Nursultan Nazarbayev, president of the republic, stated today before leaving Moscow for Washington, according to a report by the NEGA Agency.

He gave two reasons for the change in Kazakhstan's position. In the first place, the republic has become a member of the CIS collective security council, and secondly, George Bush, President of the United States, has recognized Kazakhstan as an independent participant of the treaty process for reducing and limiting strategic offensive weapons.

We have reported already that Nursultan Nazarbayev met Boris Yeltsin, president of Russia, in Moscow yesterday. According to the NEGA Agency, an understanding was reached during their meeting about the further reduction of nuclear weapons on the territory of Kazakhstan once the agreement on strategic offensive weapons has been implemented.

Nazarbayev Establishes Atomic Energy Agency

*OW1605140592 Moscow INTERFAX in English
1234 GMT 16 May 92*

[Transmitted via KYODO]

[Text] On Friday [15 May] President Nursultan Nazarbayev signed a decree on establishing in Kazakhstan a national nuclear center and an atomic energy agency.

According to experts, the decree was issued in connection with the closure of the nuclear test site in Semipalatinsk and the need to maintain the republic's scientific, technical and production potential in the use of atomic energy.

The document states that the national nuclear center is set up to ensure protection against radiation, safeguard the environment, study problems connected with utilizing and burying radioactive waste and conduct research in the area of nuclear technologies and nuclear-power engineering.

Moldova Ready To Sign Nonproliferation Treaty

*OW1505165692 Moscow INTERFAX in English
1631 GMT 15 May 92*

[Transmitted via KYODO]

[Text] Moldova is ready to put its signature under any document on the international control of mass destruction weapons non-proliferation and of conventional weapons exports, the Moldovan President Mircea Snegur stated at the meeting with the military experts' delegation of the Conference on Security and Cooperation in Europe. The CSCE military experts' delegation arrived in Moscow to discuss with the republican leadership the issues of mass

destruction weapons non-proliferation and of creation a reliable system of control for the production and export of the conventional weapons.

Tactical Nuclear Arms in Black Sea Fleet Alleged

Military Officer Denies Report

*PM1805082392 Moscow KRASNAYA ZVEZDA
in Russian 14 May 92 p 2*

[Report by Captain First Rank A. Pilipchuk: "Military Confirms Yet Again: Tactical Nuclear Weapons Have Been Withdrawn from Black Sea Fleet"]

[Text] After telling its readers of official information received through ITAR-TASS channels that the CIS Joint Armed Forces Press Center (KRASNAYA ZVEZDA 13 May this year) had denied the Ukrainian leaders' statements about the presence of tactical nuclear weapons in the Black Sea Fleet, KRASNAYA ZVEZDA in turn contacted Rear Admiral Anatoliy Manchenko, first deputy chief of staff of the Black Sea Fleet.

"According to my information," Anatoliy Manchenko reported, "not one tactical nuclear charge is left on the fleet's ships today."

Captain First Rank Valeriy Novikov, chief of the CIS Navy Press Service, confirmed:

"Nobody has any grounds for claiming the opposite."

At the same time Valeriy Novikov cited assertions by the Navy command and corresponding documents which he has been able to see.

Fleet Officer on Warhead Storage

*LD2005094592 Moscow ITAR-TASS World Service
in Russian 0255 GMT 20 May 92*

[By ITAR-TASS correspondent Vladimir Palagutin]

[Text] Vladivostok, 20 May—The detonations of shells at the artillery ammunition stores in Vladivostok have raised the perfectly justifiable question of the fate of the nuclear warheads storage facilities that the Pacific Fleet, the largest in the CIS, undoubtedly possesses. The ITAR-TASS correspondent has asked the head of the planning and organization department of the Fleet maintenance directorate, Captain Igor Drozhizitskiy, to comment on the situation: Yes, the Fleet has such storage facilities. But they are situated in areas that are difficult to reach and are not connected to the conventional weapons dumps. In contrast with the other facilities, where the shortage of our own staff forces us to use the services of non-departmental security personnel, these arsenals are guarded by conscripts. And the level of technical sophistication is beyond a layman's wildest imagination. All these facilities are underground, hidden at a great depth, and access to them is allowed only to officers not below the rank of major. Therefore, accidental situations are ruled out. The results of the latest inspections have demonstrated that the level of protection and maintenance in such facilities corresponds to all the accepted international standards and norms.

'Western Experts' Concerned by Exporting of Arms

*LD1405103292 Moscow Radio Rossii Network
in Russian 0700 GMT 14 May 92*

[Text] NEGA reports that a delegation of Western experts has arrived in Alma-Ata to study the export of arms and strategic raw materials. The delegation has concluded that anyone can buy a nuclear submarine in the CIS. The facts on Kazakh arms sales have not yet been revealed. The experts are concerned that the status of defense enterprises has changed with the Union's collapse in that they can have access to foreign market and can now sell arms to countries carrying out military operations.

CheTeK Firm Accused of Illegal Activities

*924P0137A Moscow MOSKOVSKIYE NOVOSTI
in Russian No 19, 10 May 92 [Signed to press
5 May 92] p 14*

[Article by Vladimir Orlov: "Russian Nuclear Business: A Threat or a Bluff?"]

[Text] In the near and far West, they are still worried about the state of nuclear power in Russia and the possibilities of the uncontrolled export of nuclear components, especially plutonium, enriched uranium, and heavy water.

Foreign experts suspect that the threat may come not from a "uranium mafia," the very existence of which is still very doubtful (criminal groups prefer to operate with rare-earth metals rather than radioactive metals), but from the new "private entrepreneurs." Or, more accurately, in most cases from quasi-private enterprises established with the blessing of state structures close to the military-industrial complex and its lobbyist organizations.

Knowing in detail the ins and outs of the corridors of power and having experience in the quiet sabotage of legislative organizations, the influential "new Russian entrepreneurs" are quite capable of engaging in semilegal uranium business, delighting more than a dozen developing states that intend to obtain high-quality raw material and technology for nuclear military programs. Much is being done without control and is not subject to subsequent reporting. More and more often, the eye catches the name "CheTeK" in the overall flow of information.

The international corporation CheTeK (Chelovek [man]—Tekhnologiya—Kapital) was founded in December 1990 as a private holding company, although it actually existed and exists as a branch of the Ministry of Atomic Energy and the Research Institute for Experimental Physics (Arzamas-16). Exactly a year ago, Vladimir Dmitriyev, then president of the firm, declared at the Moscow conference on the disposal of chemical weapons that CheTeK is capable of "exporting services." Soon he was in Ottawa, where at a conference on the ecological consequences of underground nuclear tests he told of the tests on the disposal of nuclear wastes being prepared for the summer of 1992 on Novaya Zemlya.

The commercial efforts of the corporation were supported by Viktor Mikhaylov, then chief of the military-nuclear

complex and since March 1992 minister of atomic energy for Russia. He wrote U.N. Deputy General Secretary Jan Martensen (I quote in a reverse translation from the English): "The first significant practical results on the effective disposal of chemical and nuclear weapons may be achieved very soon. In this connection, our choice falls on the financial possibilities of the corporation CheTeK, which financed our work with the sum of 130 million rubles. CheTeK has owner's rights to use the technology and is responsible for determining partners and suppliers of materials that must be disposed of on a commercial basis."

CheTeK is becoming the exclusive owner of the technology for the ecologically clean disposal of highly toxic chemical and industrial wastes, utilizing the energy from underground thermonuclear explosions. Then comes the hitch. According to official documents of the Ministry of Atomic Energy, the technology was discussed and approved at three international conferences. But the reference to at least one of them, the one in Ottawa, was not confirmed.

Prof. William Potter, the primary Western investigator of the actions of CheTeK, published an article in the NEW YORK TIMES in which he said that the company that offers strange nuclear-chemical services and technologies "maintains an enormous number of limousines and has representations in eight cities and a luxurious boarding house near Moscow that formerly belonged to the party elite."

The accounts in the millions and the scope of CheTeK do not fit the miserable exterior of the main office. Nevertheless, the squat structure is located on the corner of Varvarka and the Old Square: two minutes on foot to the government and five to the Kremlin—one of the most privileged business locations in the capital.

Nor does the recent vastness of the company's plans match up with today's statements of its leaders. About the leaders: as though trying to avoid an avalanche of questions evoked by the plans of Mr. Dmitriyev, the managing board dismissed him from his position. The official version: for health reasons.

They did not let the correspondent of MOSKOVSKIYE NOVOSTI see the new president of the company, explaining that he is "extremely busy before his trip to Germany, where he will explain the situation with respect to the accounts of CheTeK." Vice President Aleksandr Fokin agreed to talk only by telephone. He denied all the reports about the company's involvement in the business of nuclear technologies. "We deal only with ecological projects and also build apartments for physicists from Arzamas-16. We have no technologies and we will not take part in possible tests on Novaya Zemlya."

Indeed, CheTeK does not figure in any list of firms exporting licensed nuclear or chemical materials and technologies. State officials responsible for the monitoring of exports are unanimous in saying that they know about CheTeK and see it as the result of the game and fight of the managers of nuclear power but do not take seriously talk

about the danger of this firm. "It is bluffing," said Vladimir Fartakov, representative of the Ministry of Atomic Energy.

But the version of a toothless CheTeK evokes a certain skepticism in the West and in Moscow. "I would pursue such appeasing reports the same way as do the editors of American newspapers when they receive sensational information: 'It is important, if it is not a lie,'" says Robert Manoff from the New York Center for the Problems of War, Peace, and Mass Information.

At the same time, there is not yet any proof of illegal activities by CheTeK. In this connection, it is also necessary to keep in mind the following circumstance: along with the real interest of experts on disarmament problems in strictly monitoring any questionable step by Russian firms, there is also the factor of the competitive struggle that is facilitated by the strongly pronounced nuclear phobia in the mass consciousness. Any rumor about leaks of uranium across the borders or about doubtful technologies may be utilized (if not provoked) by American, French, and Australian suppliers of enriched uranium to squeeze Russian exporters. The nuclear industry, above all the trade in enriched uranium, is one of the few objects of legitimate pride of Russian export services. In 1991 alone, the export of uranium yielded more than \$500 million and this is five to seven percent of world exports. Russia now intends to reach 25 percent.

Chelyabinsk Isotope Plant Seeks Customers

*PM1505145392 Moscow Teleradiokompaniya
Ostankino Television First Program Network
in Russian 1100 GMT 12 May 92*

[Video report from Chelyabinsk-65 by S. Sergeyev and V. Sosunov; from the "Novosti" newscast]

[Text] [Sergeyev] [Video shows workers in the Chelyabinsk-65 plant] This is the CIS' only radio-isotope production plant. It has been incorporated into the major defense enterprise, the Mayak Chemical Combine. Conversion began here over 20 years ago. Today, virtually the entire output of radio isotopes is intended for peaceful ends. In particular, for the treatment of tumors, for diagnosis, and for manufacturing compact heart pacemakers. Production costs in recent times have gone up, Plant Director Anatoliy Kirinovskiy says. Whereas for consumers in the former Union states prices have not increased by much. As for the medical sector, isotopes are sold to it on favorable terms. At a significant loss, in fact. It was decided to cover the cost with hard currency from sales of radio isotopes on the international market. The Chelyabinsk workers intend to increase the volume of deliveries abroad, and they are actively seeking new customers for their product, which is in many ways unique. A joint venture has just been set up with the well-known British firm Amersham, and the partners hope that in the next two to three years they will manage to gain the lead in the world radio-isotope trade and to leave such rivals as the big Canadian firm "Nordion" [as heard] far behind. [video shows scenes from Chelyabinsk-65]

'Unofficial' Versions of Anthrax Leaks Reported

924P0138A Moscow KOMSOMOLSKAYA PRAVDA
in Russian 14 May 92 p 1

[Unattributed article: "Does a Cow Amount to a Bacteriological Bomb?"]

[Text] Official Versions

Version No. 1. Spring 1979. The first patients with anthrax were hospitalized in Sverdlovsk. A commission of the Ministry of Health concluded that the infection spread to people from a sick cow.

Version No. 2. Fall 1989. Students drafted to help collective farmers in the fields around Krasnoufimsk in Sverdlovsk Oblast fell ill with an unknown disease. The tragedy recurred two years later. The cause has not been determined to this day.

Unofficial Versions

As early as 1979, rumors spread in Sverdlovsk that the "thrax" leaked from military settlement No. 19.

Circumstantial Evidence

On 4 April 1992, the president of Russia signed the Law on Upgrading Survivor Benefits for the Families of Citizens Who Died of Anthrax in the City of Sverdlovsk in 1979. Almost at the same time, our country finally admitted that it had violated the 1972 convention banning bacteriological weapons.

The final stage of the investigation is beginning. A KOMSOMOLSKAYA PRAVDA investigative team is flying to Yekaterinburg.

FRANCE

Weapons Development Cooperation Prospects Examined

*PM1405120492 Paris LE FIGARO in French
12 May 92 p 12*

[Interview with Yves Sillard, Defense Ministry commissioner general for armaments, by Jean-Paul Croize; place and date not given]

[Excerpts] "Opening up Europe" should be one of the main topics at the fourth "science and defense conference" today and tomorrow in Paris. Organized by the Defense Ministry's General Commission for Armaments, this conference—which takes place with the help of the Research and Space Ministry and several scientific bodies (2,000 people are expected to attend)—will deal with four topics this year: space technology, information and communications systems, acoustics and vibrations, and mobile robotics.

Yves Sillard, commissioner general for armaments, explains how many crucial fields of research should acquire a European dimension in the coming years. [passage omitted]

[Croize] Are we not in danger of losing our independence in some key sectors of our defense system?

[Sillard] No, inasmuch as we will retain the freedom to decide on participation. With each new program we will be able to choose between a national framework—which will generally apply to nuclear issues, for instance—and a European framework.

[Croize] In which fields are military research activities already being conducted within an international framework?

[Sillard] There are many. First, at the bilateral level, work is going on with Britain and Germany. We have 17 technical agreements with the former, three of which concern exploratory developments in detonation science, countermeasures, and multifunctional laser receivers. With Germany, 18 programs are being carried out, including three concerning important exploratory developments in twin-mode guidance [autodirecteurs bimodes], electronic cannons, and the use of fiber optics in missiles.

At the multilateral level, France initiated the "Euclid" program designed to strengthen Europe's technological fabric. Because of certain difficulties, almost three years have elapsed between the program's launch in June 1989

and the signing of the first contract, for work on solid-state lasers, which is expected in the next few days. But I think that this cooperation will be a good thing. At present 15 technical agreements have been signed, involving seven of the 11 fields of activity envisaged—aerial radar technology, silicon microelectronics, composite structures, artificial intelligence, optronics, submarine detection, and training simulators. [passage omitted]

GERMANY

Arms Lobby Urges Loosening of Export Regulations

*AU1105172292 Hamburg DER SPIEGEL in German
11 May 92 p 16*

[Text] The Economics Ministry and the Defense Ministry are obviously willing to give in to the massive urging of German industry for loosening the recently tightened regulations on arms exports. Encouraged by officials in the Economic Ministry of Minister Juergen Moellemann (Free Democratic Party of Germany), the Association of German Industry (BDI) has started a campaign against Bonn's restrictive export regulations.

In the letter of complaint to the Chancellor's Office, to several ministries, and many Bundestag deputies, BDI Main Executive Secretary Ludolf von Wartenberg claims that "Germany and its military technology industry" are threatened with "isolation," if the markets for "defense goods" remain "closed" to the arms companies.

In a confidential report, the BDI lists examples of cases in which arms companies lost millions "as a result of the singular German restrictions on arms exports." Even subcontractor deliveries of tank chains and engines for cooperation projects with NATO partners are being blocked. This "restricted cooperation capability" excludes Germans "more and more from European cooperation."

The Economics Ministry and the Defense Ministry have a positive attitude toward the desire of the arms lobby to "adjust the approval procedures to the requirements of the companies." An internal note of Moellemann's ministry reads: "Alleviations must ... be introduced where they are still possible."

Like the lobbyists, ministry officials count on the negotiations for harmonizing the EC regulations on arms exports. Because a tightening of the regulations in line with Bonn's example is not to be expected, several EC partners, headed by England and France, strictly reject restrictions of their worldwide arms deals imposed by the EC.

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