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Programme for Promoting Nuclear Non-Proliferation, Newsbrief, Number 32

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Summary:

A compilation of the latest news, events, and publications related to nuclear weapons and nuclear non-proliferation. The "Newsbrief" was produced by the PPNN and personally edited by Ben Sanders.

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NEWSBRIEF

4th Quarter 1995

Editorial Note

The **Newsbrief** is a quarterly publication of the Programme for Promoting Nuclear Non-Proliferation (PPNN). It gives information about the actual or potential spread of nuclear weapons and about moves to prevent that spread. It also contains selected references to developments relating to the peaceful uses of nuclear energy. Its contents are based on publicly available material, selected and presented so as to give an accurate and balanced depiction of pertinent developments.

This issue of the **Newsbrief** covers events that occurred, or that came to the editor's attention, in the period 8 October–31 December 1995.

The limited size of the **Newsbrief** makes it necessary to choose among items of information and to present them in condensed form. Because many press organs take their information from the same sources, news items often duplicate each other, adding to the need to make careful selections from among the available material.

PPNN's Executive Chairman, Ben Sanders, is editor of the **Newsbrief**. He produces it and takes sole responsibility for its contents. The inclusion of an item does not necessarily imply the concurrence by the members of PPNN's Core Group, collectively or individually, either with its substance or with its relevance to PPNN's activities.

Readers who wish to comment on the substance of the **Newsbrief** or on the way any item is presented, or who wish to draw attention to information they think should be included, are invited to send their remarks to the editor for possible publication.

Unless otherwise stated, sources referred to in this issue, and publications listed, date from 1995.

The Editorial Note for the **Newsbrief**'s previous issue, Number 31, mentioned that PPNN's current phase would end on 31 December 1995, that it was planned to carry on with the **Newsbrief** during 1996, and that means were being sought to continue beyond that year. Those means have been found. A number of American foundations as well as one

Japanese organisation have made grants that will enable PPNN to continue its work well into 1997 and will make it possible for the **Newsbrief** to carry on for at least the same period. (See also below, **Section II. PPNN Activities**)

I. Topical Developments

a. NPT Events

- **Comoros** deposited its instrument of accession to the NPT on 4 October in Washington. The NPT now has 182 parties.

b. Further Non-Proliferation Developments

- At its Special Commemorative Session the **General Assembly of the United Nations** adopted a 'Declaration on the Occasion of the Fiftieth Anniversary of the United Nations', in which '...we, the Member States and observers of the United Nations, representing the peoples of the world...' state, *inter alia*, that they will

Strongly support United Nations, regional and national efforts on arms control, limitation and disarmament and the non-proliferation of nuclear weapons, in all aspects; and other weapons of mass destruction, including biological and chemical weapons and other forms of particularly excessively injurious or indiscriminate weapons, in pursuit of our common commitment to a world free of all these weapons ...

- The **African Nuclear-Weapon-Free Zone Treaty** (known as the Pelindaba Treaty) has been submitted to the United Nations General Assembly. The treaty, of which the full text is reproduced in **Section IV. Documentation**, of this **Newsbrief**, was prepared by a Group of Experts designated by the United Nations in cooperation with the Organisation of African Unity (OAU). It was finalised at a meeting in South Africa, in May-June, between the UN expert group and an Intergovernmental Group of Experts of the OAU. It was

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subsequently submitted to the OAU's Council of Ministers, which considered it at a session in Addis Ababa on 21-23 June, and made some amendments; a resolution adopted by the Council of Ministers, on the implementation of the Treaty, is reproduced as an appendix to the text. After approval by the Assembly of Heads of State and Government of the OAU, the text of the Treaty was transmitted to the UN Secretary General by the Chairman of the Group of Experts, Ambassador Oluyemi Adeniji of Nigeria. The pertinent letter of transmittal is also reproduced. The resolution adopted on the subject by the UN General Assembly is referred to in section d., below, along with other resolutions adopted by the Assembly during its 50th regular session. The Treaty is scheduled to be opened for signature at a conference in Cairo in early 1996. (UN Document A/50/426, 2/8)

- At the 29th meeting of the standing committee of the Association of South East Asian Nations (ASEAN) the Foreign Minister of Indonesia announced that details of a **South East Asian Nuclear-Weapon-Free Zone** were being finalised. On 15 December, the Treaty was signed at the fifth ASEAN summit meeting at Bangkok by leaders of the seven members of that organisation: Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam, and by Burma, Cambodia and Laos. They have rejected objections to the Treaty expressed by China and the United States, which reportedly see the Treaty as potentially restricting their freedom to move nuclear-powered or -armed ships or aircraft in the area. China is also understood to object to the fact that the Treaty applies to regions of the South China Sea to which it lays claim. The full text of the treaty is reproduced in **Section IV. Documentation**, of this **Newsbrief**. (**International Herald Tribune**, 14-15/10, 11/12; **Reuter's**, 11/12; **New York Times**, 16/12; **Direct Information**)
- In August **Brazil's** President Cardoso submitted a bill to the country's Congress regulating the export of sensitive goods and services, in preparation for Brazil's accession to the Missile Technology Control Regime (MTCR) in October. The country has been applying the MTCR principles since early 1994. Argentina joined the MTCR in 1994. (**Gazeta Mercantil** [Sao Paulo], 24/7)
- In early December Prime Minister Shimon Peres of **Israel** was reported to have told journalists in Tel Aviv that he had reached an understanding with President Hosni Mubarak of **Egypt** to suspend discussion of Israel's nuclear-weapon programme and drop demands for its immediate denuclearisation until there was a comprehensive peace treaty. Reportedly, Peres promised Mubarak that one year after peace with Lebanon and Syria has been established Israel would be willing to enter into a treaty on the establishment of a nuclear-weapon-free zone in the region. Some observers linked these comments to the announcement made shortly afterwards that 'a new phase' of intensive and broad peace negotiations between Israel and Syria, with American mediation, were to start at the end of December — as they have since done, on the 27th of the month, at a site in the vicinity of Washington. This potential linkage was confirmed a few days later when Mr. Peres told Israeli journalists that if there was peace in the Middle East, Israel would 'give up the nuclear programme'. While unwilling to go into details either about the elements of the nuclear programme which Israel would

be ready to give up or about the extent of the regional arrangements to which he was referring, Mr. Peres was quoted in the press as saying that '... after peace arrives, we'll be in a Middle East free of nuclear weapons'. (**Defense News**, 11/12; **New York Times**, 17/12, 23/12; **Guardian**, 23/12)

- On 20 October France, the United Kingdom and the United States announced that they will sign the protocols of the **Rarotonga Treaty**. This will in effect mean that the South Pacific will become a nuclear-weapon-free zone. France has also announced that it will close its test site at Mururoa once it has completed its current series of tests. The English version of the joint statement reads:

The Governments of the French Republic, the United Kingdom of Great Britain and Northern Ireland, and the United States of America believe that internationally recognized nuclear weapon free zones, on the basis of arrangements freely arrived at among the States of the region concerned, can contribute to international peace and security. The 1995 NPT Review and Extension Conference recognized this fact and encouraged the creation of such zones as a matter of priority. The Conference also recognized that the cooperation of all the nuclear-weapon States and their respect and support for the relevant protocols are necessary for the maximum effectiveness of such nuclear weapon free zones and relevant protocols. In this regard, we are jointly announcing today our intention to sign the relevant protocols to the Treaty of Rarotonga in the first half of 1996.

Of the 15 members of the South Pacific Forum 12 are parties to the Rarotonga Treaty as well as to the NPT. The Federated States of Micronesia and the Marshall Islands, and Tonga are only parties to the NPT. (**Independent**, 19/10; **International Herald Tribune**, 20/10, 21-22/10; **US Department of State**, 20/10; **New York Times**, 22/10; **Arms Control Today**, November; **IAEA Document INFCIRC/492**, 15/11)

- The **Republic of Korea** has joined the Nuclear Suppliers Group. (**Korea News Review**, 21/10)
- **Switzerland** has tightened its nuclear export control system. The Swiss federal parliament has set the maximum penalty for the violation of export controls at SF 1 million (it was SF 20,000); in addition, a prison sentence of up to ten years may be imposed. The law also applies to activities of Swiss citizens abroad, if the country of export does not prosecute. (**Nucleonics Week**, 23/11)

c. Nuclear Disarmament and Arms Limitation

- In mid-November the **International Court of Justice** completed three weeks of hearings on the legitimacy of the use or threat of use of nuclear weapons. An application for an advisory opinion on this matter had been made by the World Health Organization and the General Assembly of the United Nations. During the hearings fifteen countries expressed the view that the use or threat of use of nuclear weapons was illegal; France, Germany, Italy, the Russian Federation, the UK and the USA stated that it is not illegal. The UK and the USA also questioned the competence of the Court in this matter. A decision is not expected before February 1996. (**Asahi Shimbun**, 31/10, 9/11, 16/11; **Financial Times**, 31/10; **Inter-**

national Herald Tribune, 31/10; **Süddeutsche Zeitung**, 31/10; **Tokyo Shimbun**, 9/11; **Yomuri Shimbun**, 16/11; **Sankei Shimbun**, 16/11; **New York Times**, 20/11; **War & Peace Digest**, Fall/December; **Observer**, 17/12)

- In a White Paper on arms control and disarmament **China** has expressed strong dissatisfaction with the arms control policies of the other four nuclear-weapon countries who, it claims, continue to develop nuclear weapons and outer space weapons, including guided missile defence systems, while seeking to deny the peaceful use of nuclear energy to the developing world. In a major policy statement, issued on 16 November, Beijing reportedly criticises discriminative (sic) anti-proliferation and arms control measures, directing the spearhead of arms control at the developing countries. The document expresses formal opposition to American proposals for the deployment of anti-ballistic defence systems in Asia. (**Xinhua News Agency** [Beijing], 16/11; **New York Times/International Herald Tribune**, 17/11)

d. The United Nations General Assembly

During its fiftieth regular session the **General Assembly of the United Nations**, on 12 December, adopted a number of resolutions of relevance to matters dealt with in the **Newsbrief**. In numerical order, these include:

- **resolution A/RES/50/61** (Verification in all its aspects, including the role of the United Nations in the field of verification), adopted by a recorded vote of 157 to 1 (USA) and 6 abstentions, which notes the report by a Group of Governmental Experts on this matter and, *inter alia*, asks the Secretary-General to seek member States' views on the report and encourages member States to consider its recommendations and assist the Secretary-General in their implementation;
- **resolution A/RES/50/64** (Amendment of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water), adopted by a recorded vote of 110 to 4 (Israel, Russian Federation, UK, USA) and 45 abstentions, which urges all States parties to that Treaty to contribute to the conclusion of a comprehensive nuclear-test-ban treaty as soon as possible and asks the President of the Amendment Conference to conduct consultations to that end;
- **resolution A/RES/50/65** (Comprehensive nuclear-test-ban treaty), adopted without a vote, which calls upon all States participating in the Conference on Disarmament, in particular the nuclear-weapon States, 'to conclude, as a task of the highest priority, a universal and multilaterally and effectively verifiable comprehensive nuclear-test-ban treaty which contributes to nuclear disarmament and to the proliferation of nuclear weapons in all its aspects, so as to enable its signature by the outset of the fifty-first session of the General Assembly.' The resolution declares the readiness of the General Assembly to resume consideration of the item, 'as necessary', before its next regular session;
- **resolution A/RES/50/66** (Establishment of a nuclear-weapon-free zone in the region of the Middle East), which was adopted without a vote, 'urges all parties directly concerned to consider seriously taking the practical and urgent steps required for the implementation of the proposal' to establish such a zone,

and 'as a means of promoting this objective' to adhere to the NPT. Among other things, it urges all States that have not done so to place all their IAEA nuclear activities under safeguards; refers to the ongoing Middle East peace negotiations; invites all States of the region pending the establishment of a nuclear-weapon-free zone not to develop, produce, test or otherwise acquire nuclear weapons; and asks the Secretary-General to pursue consultations in order to move towards the establishment of such a zone;

- **resolution A/RES/50/67** (Establishment of a nuclear-weapon-free zone in South Asia) which was adopted by a recorded vote of 154 to 3 (Bhutan, India, Mauritius) and 9 abstentions, reaffirms its endorsement in principle of the concept of a nuclear-weapon-free zone in South Asia; urges the States of the region to make all possible efforts to establish such a zone; welcomes the support of the five nuclear-weapon States for this proposal; requests the Secretary-General to ascertain the views of the States of the region and promote consultations among them to explore the best possibilities of furthering these efforts;
- **resolution A/RES/50/68** (Conclusion of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons) which was adopted by a recorded vote of 122 to none, with 44 abstentions, recommends that the Conference on Disarmament 'actively continue intensive negotiations with a view to reaching early agreement and concluding effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons, taking into account the widespread support for the conclusion of an international convention and giving consideration to any other proposals designed to secure the same objective';
- **resolution A/RES/50/70 A** (Nuclear testing), adopted by a recorded vote of 85 to 18, with 43 abstentions, commends the nuclear-weapon States observing nuclear testing moratoria and urges them to continue doing so, pending the entry into force of a CTBT; strongly deplores all current nuclear testing and strongly urges the immediate cessation of all nuclear testing;
- **resolution A/RES/50/70 C** (Nuclear disarmament with a view to the ultimate elimination of nuclear weapons) was adopted by a recorded vote of 154 to none, with 10 abstentions, urges all States not parties to the NPT to accede to it at the earliest possible date, recognising the importance of universal adherence; calls for 'the determined pursuit by the nuclear-weapon States of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goals of eliminating those weapons'...; and calls on 'all States to implement fully their commitments in the field of disarmament and non-proliferation of weapons of mass destruction';
- **resolution A/RES/50/70 E** (Prohibition of the dumping of radioactive waste), which was adopted without a vote, *inter alia* expresses grave concern about any use of nuclear wastes that would constitute radiological warfare; calls for the early conclusion of a convention on the prohibition of radiological weapons that should take account of radioactive wastes as part of its scope; and calls for measures to prevent the dumping of nuclear or radioactive wastes in a way that would infringe on States' sovereignty;

- **resolution A/RES/50/70 F** (Convening of the fourth special session of the General Assembly devoted to disarmament), adopted by a recorded vote 111 to 2 (Israel and USA) with 49 abstentions, decides to convene a special session on disarmament in 1997, and to establish a Preparatory Committee which is to meet for a short organisational session before the end of the fifty-first session of the General Assembly in order, *inter alia*, to set the date for its substantive session;
- **resolution A/RES/50/70 I** (Bilateral nuclear arms negotiations and nuclear disarmament), adopted by a recorded vote of 150 to none, with 14 abstentions, 'encourages and supports the Russian Federation and the United States of America in their efforts to reduce their nuclear weapons and to continue to give those efforts the highest priority ...';
- **resolution A/RES/50/70 P** (Nuclear disarmament), adopted by a recorded vote of 106 to 39, with 17 abstentions, 'recognizes that ... time is now opportune for all nuclear-weapon States to undertake effective nuclear disarmament measures with a view to the total elimination of these weapons within a time-bound framework'. Among other things, it urges nuclear-weapon States to stop adding to and modernising their nuclear stockpiles and calls upon them to 'undertake step-by-step reduction of the nuclear threat and a phased programme of progressive and balanced deep reductions of nuclear weapons, and to carry out effective nuclear disarmament measures with a view to the total elimination of these weapons within a time-bound framework';
- **resolution A/RES/50/70 Q** (1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons), adopted by a recorded vote of 161 to none, with 2 abstentions (India and Israel), is reproduced in **Section IV. Documentation**, of this **Newsbrief**;
- **resolution A/RES/50/70 R** (Contribution to nuclear disarmament) adopted without a vote, welcomes the accession of new parties to the NPT; acknowledges progress in the implementation of START I and the signing of START II, and welcomes the fact that South Africa has voluntarily given up its nuclear weapon programme and that Belarus, Kazakhstan and Ukraine have voluntarily renounced nuclear weapons;
- Next, the General Assembly adopted a **Decision**, with a recorded vote of 114 to 1 (USA) and 49 abstentions, in which it recalled its decision to include in the provisional agenda of its fifty-first session the item 'Non-proliferation of weapons of mass destruction and of vehicles for their delivery in all its aspects';
- **resolution A/RES/50/71 E** (Convention on the Prohibition of the Use of Nuclear Weapons), adopted by a recorded vote of 108 to 27, with 28 abstentions, requests the Conference on Disarmament to commence negotiations on an international convention prohibiting the use or threat of use of nuclear weapons under any circumstances. A draft of such a convention was attached to the resolution;
- **resolution A/RES/50/73** (The risk of nuclear proliferation in the Middle East), which was adopted by a recorded vote of 56 to 2 (Israel and the USA), with 100 abstentions, calls on Israel and all other States of the region that are not yet party to the NPT to accede to it and calls on states that have not yet done so to place all unsafeguarded facilities under full-scope IAEA safeguards;
- **resolution A/RES/50/77** (Consolidation of the regime established by the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean [Treaty of Tlatelolco]), adopted without a vote, notes the progress made to bring the Treaty into force and urges countries of the region that have not yet done so to deposit their instruments of ratification of the amendments to the Treaty; and
- **resolution A/RES/50/78** (Final text of the African Nuclear-Weapon-Free Zone Treaty [the Pelindaba Treaty]), adopted without a vote, welcomes 'with special satisfaction' the adoption of the final text; invites African States to sign and ratify the Treaty; and calls on 'the States contemplated in Protocol III ... to take all necessary measures to ensure the speedy application of the Treaty to territories for which they are *de jure* or *de facto* internationally responsible, and which lie within the limits of the geographical zone established by the Treaty'; and calls on the nuclear-weapon States to sign the Protocols that concern them 'as soon as the Treaty becomes available for signature'. The Treaty is reproduced in full in **Section IV. Documentation**, of this **Newsbrief**.

e. Nuclear Testing

- On 1 and 27 October, 21 November and 27 December **France** conducted, respectively, the second, third, fourth and fifth underground nuclear tests of the current series. The first of these took place at Fangataufa Atoll, and the last three at the Mururoa test site. President Chirac has said that the series might be cut back to a total of six; he has denied that the world-wide protests had influenced France's decision to limit the number. French authorities have stated that the series will be completed by the end of February 1996, three months ahead of schedule. They have said that a seventh test may be conducted if more data are found to be needed to develop simulation technology.

Just before the third test took place, it was reported that the European Commission had decided not to take legal action against France for infringement of the Euratom Treaty, although France had not given it sufficient prior data, had not sought its approval before starting its latest series of tests — an obligation applying to any Euratom member planning to carry out 'particularly dangerous experiments' — and had not adequately reacted to requests to provide more information on health and safety aspects of the tests. The three inspectors who had been despatched to the test site are said to have been dissatisfied with the access they were given. Reportedly, however, the European Commission has reached the conclusion that it is not obvious that the tests violate its radiation safety standards. The Commission does insist on France's undertaking long-term monitoring of radioactivity in the test zone and reporting the results to Brussels.

The summit meeting of the Commonwealth of Nations which was held in Auckland, New Zealand, in November, adopted a statement condemning the French tests. British Prime Minister John Major, who expressed disagreement with the statement, was himself taken to

task severely for saying that the matter was a decision for France to take. The issue is seen as having caused a serious conflict between the UK and the 51 other members of the Commonwealth. At a British-French summit meeting on 30 October, just before the Commonwealth meeting, Messrs. Chirac and Major had announced they had 'deepened' their cooperation on nuclear deterrence and formally reaffirmed that they would be willing to use nuclear weapons on each other's behalf. Observers do not conclude that this signifies a change in the policy that the nuclear arsenals of the two countries will remain separate and independent, but they do see the statement as reflecting a move towards the development of a joint Franco-British defence policy, which would include nuclear deterrence.

There is criticism in the United States that the Administration on the one hand censures France for breaking the testing moratorium, yet on the other hand appears to allow overflights and landings of French military aircraft that reportedly carry military equipment and personnel connected with the tests to Mururoa. France seems to have assured the US Administration that the aircraft do not carry any dangerous materials, but Washington is said not to have verified this.

A report in the French daily newspaper *Le Monde* has alleged that cracks have opened under Mururoa Atoll. The French government initially denied the report, accusing the paper of lying and threatening to prosecute it in court for spreading false information. *Le Monde* has insisted that the cracks appear on a map prepared by the French military in the early 1980s, but officials of the French Ministry of Defence are cited as charging that the map is a fake, possibly drawn by *Greenpeace*. Former French defence minister Jean-Pierre Chévenement has been quoted in the French press as saying that fissures had indeed been spotted in the 1980s, that they had not appeared in deeper layers, and that careful monitoring had shown that the situation had not worsened since. In what seems to have so far been an inconclusive exchange, conflicting views have been presented about the likely further effects of the tests on the sub-soil, the wisdom of the choice of the testing sites, and the depth at which the fissures are found as against the depths at which the tests take place. Reports about huge numbers of fish in a two-kilometre area around Mururoa Atoll being literally blown apart by the tests have surfaced in Australia. Referring to reports that the tests are doing damage to the oceanic subsoil and to living organisms, Prince Philip, husband of Queen Elizabeth, is also said to have expressed displeasure with France's actions.

There is a widespread impression that the French government is surprised, angered and hurt by the strong and persistent official and popular criticism of its continued nuclear tests, not only from the Pacific area but also in Europe. France has criticised member states of the European Union who voted in favour of Resolution A/RES/50/70 A adopted by the UN General Assembly by 85 votes in favour, 18 against and 43 abstentions, which deplores all current nuclear testing and strongly urges its immediate cessation. The original members of the European Community, Belgium, Italy and the Netherlands, which voted in favour of the resolution, have become particular objects of France's ire. Paris has cancelled a summit meeting with Italy and a visit of Belgium's Prime Minister; Prime Minister Juppé has refused to go through with a dinner meeting with the

Prime Minister of Finland, which also supported the resolution. President Chirac, on the other hand, specifically thanked Germany, Greece and Spain for having abstained in the voting.

In the Italian port of Brindisi a ship belonging to *Greenpeace* was raided and damaged by sailors from a French frigate, allegedly for bumping it. *Greenpeace* has appealed a ruling by a Tahitian court not to order the French authorities to return two ships, the *Greenpeace* and *Rainbow Warrior II*, several inflatable boats and a helicopter, which were seized during protests at Mururoa Atoll, just before the first test. Among other incidents that have received media attention is one in which a group of Danish school children visiting Paris seem to have been forcibly restrained by French police from wearing 'anti-nuclear' T-shirts, because the slogans printed on them might provoke anti-French feelings and were insulting to the French President. In a number of countries consumers refuse to buy French products. A bill providing for an 800 per cent increase in the US import duty on French Beaujolais wine (of which the 'new' harvest customarily arrives in America in mid-November) until France ends its nuclear test programme was introduced by a Democratic member of the US House of Representatives, but has not been adopted. In a number of countries, including Australia, Japan, Netherlands, New Zealand and several Nordic states, sales of French wine, and particularly of Beaujolais Nouveau, are said to have been affected by the boycott; a French wine trade association has reported that sales of the young Beaujolais were 18 per cent below those of the same period a year ago.

(**Trust and Verify**, October; **Reuter's**, 4/10, 11/10, 13/10, 26/10, 21/11, 22/11; **Le Monde**, 4/10, 5/10, 6/10, 13/10; **Süddeutsche Zeitung**, 5/10, 12/10, 26/10; **Independent**, 10/10, 12/10, 1/11, 14/11, 22/11; **Statement** by French Foreign Minister Hervé de Charette to the *Institut des Hautes Etudes de Défense Nationale*, 12/10; **Nucleonics Week**, 12/10, 26/10; **International Herald Tribune**, 14-15/10, 11/11, 18-19/11, 7/12; **New York Times**, 17/10, 29/10, 1/11, 2/11, 11/11, 17/11, 23/11, 14/12, 25/12, 28/12; **Frankfurter Allgemeine Zeitung**, 20/10, 11/11; **NuclearFuel**, 23/10; **Corriera della Sera** [Rome], 26/10, 22/11; **Times** [London], 26/10; **Süddeutsche Zeitung**, 26/10; **Guardian**, 31/10; **Standard** [Vienna] 31/10; **Financial Times**, 31/10, 18-19/11; **Daily Telegraph**, 31/10, 11/11, 14/11, 23/11; **Yomuri Shimbun**, 31/10; **Die Presse**, 2/11; **El Pais** [Madrid], 3/11; **Observer**, 5/11; **Asahi Shimbun**, 17/11, 18/11, 19/11)

- According to reports from Washington, US surveillance satellites have detected indications that **India** may be preparing to conduct a nuclear test at the Pokaran site in the Rajasthan desert, where in 1974 it set off what it called a 'peaceful nuclear explosion'. India's initial reaction to the disclosure was that it concerned army exercises which had been 'absurdly misinterpreted'. Subsequently, an Indian Foreign Ministry spokesman denied there was any truth in the report. That outright denial was followed by the more cautious and ambiguous statement that the report was 'totally speculative'. India, which has long called for a comprehensive nuclear test ban, is said to have changed that policy, on the basis that since the US would be able to test nuclear weapons without actual explosions, a test ban would be 'a means to perpetuate nuclear apartheid'. There is concern that if

India refuses to become a party to the CTBT Pakistan would act likewise, thereby robbing the treaty of much of its relevance. The possibility that India would deploy its 'Prithvi' missile, potentially equipped with nuclear warheads, is also seen as causing great concern among Western governments. (**Financial Times**, 14/12; **New York Times**, 15/12, 16/12; **Economist**, 23/12)

- During a brief presidential meeting in Washington, on 23 October, **Russia's** President Yeltsin announced that his country would accept a zero-yield nuclear test ban. (**International Herald Tribune**, 24/10)
- Earlier press reports that the **United Kingdom** supports a zero-yield test ban have been officially confirmed. (**London Press Association**, 14/9)
- In 1996 the **United States** will conduct the first two of a series of six sub-critical nuclear experiments at the Nevada test site Lyner facility, with four more following in 1997. The experiments are said to aim at determining the behaviour of plutonium when a subcritical quantity of that material is exposed to a detonation of high explosives. As reported, measures are taken to keep the experiments from resulting in a self-sustaining nuclear chain reaction and causing a nuclear explosion. Some experts take an unfavourable view of these experiments, as setting an unwise precedent; as technically unnecessary to ensure safety and reliability of warheads; as a means to keep the underground test facilities in Nevada open; and as a way of helping weapons laboratories to design new warheads on a computer, once a comprehensive test-ban treaty has entered into force. (**Associated Press**, 1/11; **Standard** [Vienna], 17/11; **Guardian**, 23/11)

f. Nuclear Trade and International Cooperation

- **China's** energy needs are now seen as growing faster than expected. The Vice-Chairman of the country's Atomic Energy Authority has said that by 2020 installed nuclear capacity should reach between 40,000 and 50,000 MW, as against 2,100 MWe at present. This is said to be double the amount quoted by another senior Chinese official a month ago. The consultants' firm of Wood Mackenzie estimates that electricity consumption in China will rise threefold in the coming 15 years, and that by 2010 China would account for 45 per cent of all electricity consumed in the Asia-Pacific region, as against 32 per cent now. (**NucNet News**, 15/11; **South China Morning Post**, 15/11)

Atomic Energy of **Canada** Ltd. and **China** National Nuclear Corp. are reported to have signed a memorandum of understanding on the construction of two 700-MW Candu-6 pressurised heavy-water reactors at Qinshan, near Shanghai. The actual contract is expected to be signed in early 1996. The question of financing the project appears still to be open. (**Nucleonics Week**, 19/10, 16/11; **NucNet News**, 19/10)

The **French** firms Framatome SA and Electricité de France have received a contract worth approximately \$2 billion to build two 985-MW reactors at Ling-ao in Guangdong province, of the same type as those built earlier at Daya Bay. One of the two units is to begin operation in 2002; the other in 2003. (**Reuter's**, 25/10; **NucNet News**, 25/10; **Wall Street Journal**, 26/10)

Also in China, it seems that construction of at least one of the two VVER-1000 light-water reactors to be supplied by **Russia**, which had been expected to start in 1996, will not begin until 1997. Construction is now scheduled to take eight years rather than the six mentioned in earlier reports. This means that the first unit will not be operational before 2004, at the earliest. While major equipment is to be provided by Russia, China is said to prefer buying instrumentation and control systems from Siemens or Framatome. (**Nucleonics Week**, 5/10; 7/12)

- **Cuba** expects to receive from the **Russian Federation** about \$350 million towards the completion of the two VVER-440 power reactors at Jurugua, which are said to be 80 and 50 per cent finished, respectively. The two countries are reportedly keen on attracting the co-operation of western companies in the project, both to raise safety standards and to provide additional funds; it is hoped that in this way another \$200 million might be raised. Cuba itself is said to be in a position to contribute \$208 million. It is reported that the US is strongly opposed to the project and seeks to persuade foreign firms not to participate; American companies invited to do so are all said to have declined. (**Financial Times**, 16/9; **Nucleonics Week**, 19/10)
- **EURATOM/USA**: In late October France gave the European Commission, for transmittal to Washington, the comprehensive list of storage facilities — including facilities that do not have 'the primary purpose and function' to store special fissionable material — which the United States had long insisted on receiving. At that point a last barrier to approval of the draft EURATOM/US agreement was said to be the translation of the text into the ten other Community languages so that it could be formally submitted to all member governments. On 1 November the agreement was approved for signature by President Clinton and on 7 November it was signed in Brussels by the US Ambassador to the European Union, Stuart Eisenstadt, and by the European Commission's Vice President, Sir Leon Brittan and Commissioner Christos Papoutsis. The text was thereupon submitted for review by the White House's National Security Council and, after a delay of several days caused by the temporary shut-down of Federal services and by a national holiday, it was transmitted to the US Congress on 29 November. It will have to lie before the Congress for 90 days of continuous session. If Congress does not resolve during that period to approve or disapprove the agreement, it will automatically enter into force at the end of the 90 days. Representatives of both political parties in the two Houses of Congress had previously asked the US General Accounting Office (GAO) for an assessment whether the agreement meets the requirement of US non-proliferation law. The request from the Republican Senator Richard Lugar, who chairs the Senate Foreign Relations European Affairs Subcommittee, is said to reflect the wish to achieve a smooth review process. It is seen as counteracting the request by Democratic Representative Edward Markey, who asked the GAO for an urgent analysis, in terms that are seen as suggesting opposition to the new agreement. Initial expectations had been that there would be little congressional opposition to the agreement, but three members of the House have since written to the President, urging submission of the agreement to the House International Relations Committee and the Senate Foreign Relations Committee;

there, the agreement would sit for 30 days to allow the committees to determine if it complies with the requirements of the US Nuclear Non-Proliferation Act (NPPA) of 1978. Reportedly, the Chairman of the latter committee, Jesse Helms, had not planned to hold hearings on the agreement. The Senate Government Affairs Committee, whose senior minority member, Senator John Glenn, had earlier also asked the GAO to check whether the agreement meets the requirements of the 1978 Act was also thought to consider holding a hearing, but this now appears unlikely. There is said to be some feeling that the agreement may have gone too far in constraining US consent rights but this is not expected to stand in the way of ratification. In submitting the agreement to Congress, which was done for the purpose of both the 30-day consultation period and the 60-day consideration period running simultaneously, the President wrote to the members who had asked for its prior submission to the respective Committees to confirm the view that the agreement meets all the requirements of the Atomic Energy Act. Discussions are said to be going on about possible ways to bridge the time-span between the expiration of the current agreement, on 31 December, and the entry into force of the new one. The earliest date expected for that event is mid-March but it might be as late as May, depending on when the Congress adjourns and when it resumes its work, as well as on the action it decides to take on the requests for further consideration. The European Commission is said to have pinned its hopes on a US executive order extending the existing agreement but the US State Department seems to think this impossible. In fact, in mid-December the US Nuclear Regulatory Committee is said to have issued orders suspending a number of nuclear export licenses with expiration dates beyond 31 December.

(*Arms Control Today*, October; *SpentFUEL*, 9/10, 30/10, 6/11, 13/11, 27/11, 4/12; *NuclearFuel*, 23/10, 6/11, 20/11, 4/12, 18/12; *Nucleonics Week*, 2/11)

- **EURATOM/Russian Federation:** there are reports that Russia's Ministry of Atomic Energy and the European Supply Agency of the European Union have begun negotiations about the supply by the former of weapon-grade high-enriched uranium for peaceful uses. Final agreement is said to be expected in February. The deal is thought to create a way for Germany to run the new FRM-2 research reactor under construction at Garching near Munich on Russian-supplied highly-enriched uranium. For non-proliferation reasons, the United States had earlier sought to persuade Germany to have the reactor re-designed so that it could use uranium of a lower level of enrichment. Reportedly, however, Washington does not intend to intervene in the deal. (*NuclearFuel*, 1/1/96)

- There is reported to have been progress in the **Franco-German** project for the development of an advanced, 'super-safe', pressurised-water reactor, the European Pressurised Water Reactor, or EPR, on which work began ten years ago. A common design has been completed. Expectations about safety, as well as efficiency, a long useful lifespan, and the high burn-up possibilities are said to be favourable; construction time would only be five years. The close cooperation between the two countries would lead to a high degree of standardisation, and thus to cost saving. There are, however, no concrete cost estimates and there is concern

that, at least for the short and medium term, the project may be too expensive to be realised, especially given the fact that in France there will be no need for new nuclear reactors until the year 2010 at the earliest. As reported, having the EPR on-line by then would require that construction of a pilot version should begin before the end of the current century and that it should be operational by 2005. (*Die Welt*, 14/11; *Le Monde*, 15/11; *Handelsblatt*, 15/11; *Frankfurter Allgemeine Zeitung*, 16/11; *Nucleonics Week*, 16/11)

- A memorandum of understanding has been signed between **India** and the **Russian Federation**, regarding the construction at Kudankulam of two VVER-1000 pressurised water reactors. (*NucNet News*, 17/10)
- There are conflicting reports about the status of the agreement between **Iran** and **China** regarding the supply by the latter of two 300-MW pressurised water reactors. The US Administration still insists that it has been assured by the Chinese Minister for Foreign Affairs that the agreement had been 'terminated'. The Minister has since said that the agreement had been 'suspended for the time being'. The Iranian Foreign Ministry has said that it was unaware of any changes in its arrangements with China. Some reports indicate that the implementation of the agreement is merely delayed by uncertainty about the appropriate site of the prospective power station; a Japanese newspaper has reported that the deal seems to have fallen through because Iran could not pay for it. Reports about the collapse of the deal surfaced as early as last May, when an Arabic-language source in London reported on uncertainties about China's ability to supply all necessary technology and equipment, the failure of China to submit detailed plans and the question of financing, on which China was said to be unwilling to take part payment in crude oil, as Iran was supposed to have proposed. (*Al-Sharq Al-Awsat*, 21/5, in *FBIS-TAC-95-003*, 29/6; *Arms Control Today*, October; *Nucleonics Week*, 5/10; *New York Times*, 10/11; *Nihonkeizai Shimbun*, 10/11; *Direct information*)
- Also in **Iran**, **Russian** experts are said to have started work on the construction at Bushehr of two VVER-1000 power reactors to replace those the German firm of Siemens had been building there, but did not complete after the outbreak of the war between Iran and Iraq. Teheran is said to hope that the first unit will come on line in three years. An earlier report from an Italian source alleged that at least part of the cost of the Russian reactors might be paid in crude oil which, as the report claimed, Iran buys clandestinely from Iraq, at about one third of the current market price. In a recent review in the US journal *NuclearFuel*, the official in charge of fuel cycle activities at the Russian Ministry of Atomic Energy (Minatom) was quoted as saying that Iran could choose either to store the fuel generated in the reactors in Iran or have it reprocessed in Russia and take back both the high-level waste and the recovered fissile materials (editor's underlining). This appears to contradict earlier reports according to which Moscow would keep the produced plutonium. According to the interview, Minatom's obligations extend only to the front end of the fuel cycle. No further public information seems to be available about Russian plans, announced earlier this year, to conclude a contract with Iran for the supply of a 40-MW light-water research reactor. (*INTERFAX*)

[Moscow], 22/5, in **FBIS-TAC-95-003**, 29/6; **Corriere della Sera** [Milan], 4/6, in **FBIS-TAC-95-003**, 29/6; **NTV** [Moscow], 7/11; **BBC Monitoring Summary of World Broadcasts**, 2/12, in **UI News Briefing** 95.49; **NuclearFuel**, 18/12)

- A new prototype VVER-640 pressurised water reactor, now being developed in **Russia**, will reportedly be equipped with instrumentation and control systems from **Germany's** Siemens power engineering division. (**Nucleonics Week**, 9/11)

g. IAEA Developments

- On 1 November, the Director General of the International Atomic Energy Agency addressed the United Nations General Assembly. On that date the Assembly adopted a resolution which, among other things, commended the IAEA for its nuclear verification efforts in Iraq and the Democratic Peoples' Republic of Korea and welcomed the measures being taken to strengthen the Agency's safeguards system. It also welcomed the measures taken by the Agency in support of efforts to prevent illicit trafficking in nuclear materials or other radioactive sources.

Ambassador Johan Th. H. C. van Ebbenhorst Tengbergen has been elected Chairman of the IAEA's Board of Governors for 1995-96.

(**IAEA Newsbriefs**, November/December)

h. Peaceful Nuclear Developments

- On 26 October, unit 2 of **Armenia's** Medzamor two-unit VVER-440/230 station, which had been shut down after an earthquake in 1989, was restarted and reached criticality. After a series of tests at very low power, plans were said to have called for gradual power increases, with power generation starting on 5 November. Safety experts remain concerned about the reliability of a reactor that was considered relatively unsafe to begin with and was restarted from one day to the next after being idle for six years. Currently, the reactor is said to be operating at 20 per cent power and generating 80 MWe. Work done during the shut-down reportedly included upgrading some important safety features, the adoption of a string of measures to better cope with seismic events, and the introduction of improvements in personnel training and plant management. Lack of funds, however, is thought to have prevented the incorporation of all measures necessary to upgrade the plant to the full extent advisable. (**Nucleonics Week**, 26/10, 2/11; **Reuter's**, 26/10; **NucNet News**, 27/10, 8/11; **International Herald Tribune**, 3/11)
- Kozloduy-1, one of several first-generation VVER-440/230 reactors in **Bulgaria**, was restarted on 4 October for an initial operating period of six months. The decision was taken against strong objections from European safety organisations. While Bulgarian authorities, reportedly basing themselves on Russian analyses, claim that safety margins of the plant are enough for 12 months' operation, Western experts fear that embrittlement of the reactor vessel may have gone so far that risks of an accident along the lines of that which befell Chernobyl in 1986 have become unacceptably high. These experts have expressed the view that before the reactor was restarted, further analyses should have taken place, including the

examination of samples from the pressure vessel. Following a meeting called by the IAEA to resolve the differences, just before the start-up of Kozloduy-1, a joint statement by French and German nuclear safety agencies said that '...taking account of the absence of a convincing justification on the part of the operators, the Franco-German experts consider that a serious accident, involving the rupture of the vessel, cannot be excluded'. The reactor reached 90 per cent of its capacity within two weeks after the resumption of operations. Some experts are said to be encouraged by this, because it may mean that a particularly risky stage, at which the pressure vessel was subject to the consequences of 'thermal shock', has been successfully passed. The situation has given rise to speculation that the current cooperation on reactor safety between public bodies and industries in Western Europe and Bulgaria might be halted. The engineers of Electricité de France, who had been advising the plant operators, have been withdrawn. At a meeting in Sofia of environment ministers from 49 states, the restart of Kozloduy-1 was strongly criticised. An agreement was concluded between Bulgaria and Russia for samples to be taken from the unit's pressure vessel to analyse its ductile strength. While this would go along the lines of Western insistence that such analysis is essential, it is noted that the procedure tends to weaken the integrity of the vessel and may reduce its lifetime by several years. A Bulgarian newspaper has noted the same phenomenon and has also pointed out that closing down the four oldest units of the station might cost almost as much as building new ones, and raises the question where the funds are to come from.

Meanwhile, Kozloduy-2, which was stopped for safety upgrading last summer, has been refuelled and was restarted in November. Reportedly, the Kozloduy plant as a whole supplies half the country's electric power. The American firm Westinghouse is said to have presented the government in Sofia with a plan for upgrading units 5 and 6 at a cost of \$250 million, of which 85 per cent would be provided in the form of a loan by the US Export-Import Bank. The relevant news item quotes a Westinghouse spokesman as saying that Kozloduy-1 might well stay in service for another ten years.

(**IAEA Press Release PR 95/16**, 5/10; **NucNet News**, 5/10, 6/10, 9/10; **Libération**, 6/10; **Le Monde**, 7/10; **Frankfurter Allgemeine Zeitung**, 11/10; **Neue Zürcher Zeitung**, 12/10; **Reuter's**, 17/10; **Nucleonics Week**, 19/10, 26/10, 7/12; **Kurier**, 28/10; **BTA News Agency** [Sofia] 1/11, and **Bulgarian Radio** [Sofia], 3/11 and 7/11 in **BBC Monitoring Summary of World Broadcasts**, 9/11 and 16/11 respectively; **Demokratiya** [Sofia], 1/11 in **BBC Monitoring Summary of World Broadcasts**, 9/11)

- **France's** 1,240-MW prototype fast breeder reactor 'Superphénix', which had been operating at 30 per cent capacity since 26 September, was shut down again on 23 October after a leak was found in a steam generator. At the time, it was expected to be down until the second half of November, but at the time this issue of the **Newsbrief** was completed operations did not seem to have resumed. Reportedly the fault arose from the fact that the leaking tube had been made of the wrong kind of steel. Similar tubes in the plant were found to be made of the correct steel alloy. Management was said to hope to get permission to increase the power level to 60 per cent. (**NucNet News**, 9/10, 23/10; **Nucleonics Week**, 26/10, 9/11)

- In **Japan** on 8 December, a leak of two to three tons of liquid sodium coolant from the secondary cooling system of the fast-breeder reactor Monju caused that facility to be shut down. At the time, the reactor was running at 43 per cent of power, when, reportedly, plant personnel saw white smoke at the intermediate heat exchanger outlet, suggesting a chemical reaction between sodium and air, and a slight drop in the sodium level indicators was noted. The event is said to have been first seen as a small-scale sodium leak, but following inspection it was qualified as a medium-scale leak, at which time the reactor was stopped manually. The sodium excursion was reported to have been quickly brought under control; there were no personal injuries. Initial reports from the operating company, the Power Reactor and Nuclear Fuel Development Corporation (PNC) said there was no damage to the plant or the environment but these are now seen as having been overly optimistic and are seen by some to have been a cover-up for what may in fact have been serious damage, which seems to have been aggravated by poor management of the event. PNC has reported that while it has recovered some of the sodium that escaped from the system, it does not yet know how much of that material has leaked. Reportedly, sodium aerosol has been carried throughout the reactor building as a result of the continuing operation of the air conditioning system; this is said to have been substantially damaged. The Japanese Nuclear Safety Commission has described the event as 'very serious', although the Commission initially classified it at level zero on the International Nuclear Events Scale (INES). Government authorities are investigating the accident. Critics talk of shoddy construction and low safety standards and have expressed concern that the investigation is carried out by the company managing the reactor. Opponents of nuclear power have called for the plant to be closed down. While the Minister of International Trade and Industry has said that he was 'gravely concerned' about the incident, a representative of that ministry has said that it would not affect Japan's plutonium policy. It is expected to be at least a month before the cause of the accident is determined. A company spokesman has said that the reactor will be shut down for at least six months; other estimates range as high as two years. There is concern that a long delay in start-up will lead to Japan having an excess of plutonium on hand. (*NucNet News*, 11/12, 13/12; *New York Times*, 12/12, 17/12, 22/12; *Financial Times*, 12/12; *Nucleonics Week*, 14/12, 21/12; *Nikkei Weekly*, 18/12, in *UI News Briefing*, 95.51)
- It has been announced in **Pakistan** that the 300-MW reactor at Chasma being built with Chinese help is on schedule and that the dome cap was to be put on the reactor building in the course of November. The reactor vessel will reportedly also come from China. This was originally expected to be supplied by the Republic of Korea, but that country recently became a member of the Nuclear Suppliers Group and as such would not be able to make the supply unless Pakistan accepts full-scope safeguards. (*Nucleonics Week*, 23/11, 30/11)
- Russia's** Minister for Atomic Energy has announced plans for heating northern coastal towns in that country by using nuclear power stations made up of two 100-MW submarine reactors, mounted on floating platforms. Minister Mikhailov said that a first installation of this kind was being built and others could be made to order in two years. (*Ostankino Radio Mayak* (Moscow), 3/11)
- In the **Slovak Republic** preparations are continuing for the resumption of construction of the two VVER-440/213 units at the Mochovce power station. It is hoped that the work can be done with financing from the Czech Republic and the Russian Federation, but there is still said to be some question whether sufficient funds can be found. An agreement has been signed between Russia and Slovakia on the former's assistance in the completion of the plant. Dealing with fuel supply and the reprocessing of spent fuel, the agreement also provides for a loan to the Slovak Republic of US \$150 million. Currently available funds, however, are said not to be sufficient to engage all contractors and subcontractors. Austrian sources maintain that the chances of finding the necessary funds — beyond the 30 per cent now reportedly available — are lessening, especially as there seem to be several financially more attractive alternatives, such as the construction of a 200-MW gas turbine plant for which, reportedly, Siemens already has received a contract. That plant would be ready in 1997. Slovak Prime Minister Meciar is said still to count on completion of Mochovce-I in 1997, with Mochovce-II coming on-line a year later.

As reported, once it comes to fruition, the Mochovce project would be managed by Energoprojekt of Prague with assistance from several Russian institutions; Skoda Prague is expected to provide the bulk of the components; two Bratislava firms are involved: one, reportedly, to do most of the civil engineering and the other for the electrical work. Siemens AG and Framatome SA, working in a joint venture called Eucom, will serve as direct contractors to the project manager, for safety improvements and the supply of the equipment involved. Electricité de France, which had earlier withdrawn from the project when it became clear that as originally conceived this would be too expensive, has now signed a contract to provide initial technical support services for the completion of the station's first two units. The question of when the two older VVER-440/230 reactors at Bohunice in the Slovak Republic will be shut down still does not appear to have been definitely settled. Provisional plans are said to call for the closure of the oldest unit in the year 2000; the second one would be shut down a year later. Slovak sources insist, however, that a definitive decision will have to await progress in the completion of the Mochovce plant. Meanwhile, both units are said to have undergone considerable safety upgrades. (*Die Presse*, 5/10, 3/11; *Süddeutsche Zeitung*, 7/10; *Nucleonics Week*, 26/10, 7/12, 21/12; *Kurier*, 1/11, 3/11; *NucNet News*, 6/11)
- The move to stage a referendum on early closure of the Krsko nuclear power station in **Slovenia** has ceased for the present, following the withdrawal by a number of members of Parliament of their support for the initiative. (*Slovenian News Agency* [Ljubljana], 20/11, in *BBC Monitoring Summary of World Broadcasts*, 22/11)
- In **Sweden** discussions continue about the question whether and when nuclear power should be phased out. A referendum held in 1980 mandated the phase-out of nuclear power by the year 2010. Currently, however, as the date for deregulation of the electricity market approaches, discussions seem to centre on the best choice

of energy sources rather than on early de-commissioning of nuclear facilities. Reportedly, while it does not seem likely that new nuclear plant will be commissioned in the foreseeable future, many experts believe that the long term still holds prospects for nuclear power generation in Sweden. A commission appointed by the Swedish parliament is said to have concluded that for environmental and economic reasons a complete phase-out of nuclear power by 2010 would not be feasible, but that a phase-out should begin at an early stage. The suggestion is made that one power reactor could be shut down by September 1998. The full report has not yet been made public but it is said to include several dissenting opinions. Apparently while suggesting that more hydro energy should be used, it reflects the assumption that the bulk of lost nuclear capacity would be replaced by natural gas. Just before the report came out, an opinion poll had found that 39 per cent of those polled were in favour of a phase-out by 2010, while 59 per cent were for continued use of nuclear power also after that date. The current finance minister, however, who is expected to be the next prime minister, is reported to have said that the consensus of the referendum and the date of 2010 should stand. Representatives of Sweden's heavy industry have expressed strong opposition to any decommissioning of the country's nuclear power reactors, claiming that the replacement of nuclear-generated power by other sources would almost triple electricity costs. Industry speakers also pointed to the high cost of decommissioning, saying that the funds involved would be better used by assisting states such as Lithuania, where the Ignalina station is seen as a safety threat to Sweden, in the construction of safe nuclear power stations. There are in fact contradictory reports about the cost of decommissioning, with estimates ranging between \$1 billion and \$57 billion. (*Nucleonics Week*, 26/10, 23/11, 30/11, 21/12; *NucNet News*, 14/12, 18/12)

- During the past three months, intensive discussions took place on the issue of the closure of the Chernobyl nuclear power station, between the seven economically most advanced nations (the G-7), the European Union and **Ukraine**. After discussions in September, the parties were reported to have come somewhat closer to agreement on the manner in which that issue should be handled, and what alternative power sources should be considered. Reportedly, the idea of constructing a gas-fired power plant has been dropped. Disagreement was said to persist on conditions for the eventual shut-down of the Chernobyl station, with Ukraine continuing to insist on full compensation from the West for closing the plant, and in particular for the shut-down of Chernobyl-1, which it is said to consider its best nuclear plant and which it claims is one of the world's best performing power reactors, with a very good safety record. Thirty-nine fuel channels in that reactor have recently been replaced in what is seen as a rehearsal for an operation which, if done on a larger scale, might even make it possible for all three surviving Chernobyl reactors to operate until 2010–2015. At a subsequent meeting with the G-7, Ukraine is said to have reduced its demand for compensation from \$4 billion to \$3.24 billion, which at the time was said to be acceptable to the G-7 nations. This would supposedly cover the decommissioning of the reactors, the construction of a new shelter for the reactor that exploded in 1986, and waste management. Of the total, \$1.8 billion would be provided by the G-7 in credits and \$450 million in grants

specifically earmarked to cover costs associated with the closure of the station. Ukraine would provide \$900 million. Additionally, \$2.5 billion in credits would be needed for the construction of new power plants. It appears, however, that while, at subsequent meetings in November, these understandings were consolidated, the Ukrainian side again reverted to its earlier view that it might not be able to raise the \$900 million. Kiev was again understood to have stated that the amount the West would be willing to contribute was not enough to permit a shut-down to be started and was 'unrealistic' and it was also thought to be still hesitant about binding itself to a hard deadline for closure of a station that still provides five per cent of the country's electricity, and the expectation was aired repeatedly, that the three remaining units in the Chernobyl station could be safely operated for another fifteen years. However, at a further meeting, the G-7 and Ukraine came closer on conditions for the shut-down of the entire Chernobyl station by the year 2000. A memorandum of understanding was signed on 20 December by the Ukrainian Environment Minister, Yuri Kostenko, and Canada's Deputy Prime Minister and Environment Minister, Sheila Copps, acting for the G-7. Reportedly, this pledges \$2.3 billion in assistance to Ukraine for a shut-down by the year 2000. Earlier reports had it that, while expressing agreement on a number of principles, the memorandum would not set a deadline for closure but would list a series of steps to be taken beforehand. Apparently, it has now been agreed that the amount to be contributed by Ukraine would eventually be determined on the basis of that country's ability to pay.

It may be noted in this context that, as the American journal *Nucleonics Week* of 2 November reports, France is considering the adoption of a new approach to nuclear safety in Eastern Europe, based more on cooperation than confrontation, as has hitherto largely been the case. Germany seems to tend in the same direction and it is hoped that a common position can be defined before next Spring's G-7 meetings in Moscow. The new approach is understood to aim at giving greater recognition to the competence of Russian designers and at closer cooperation with them in upgrading reactors, including both VVER-1,000 units and RBMK plants like the one at Chernobyl.

(*NucNet News*, 4/10, 1/11, 28/11; *Enerpresse*, 6/10; *Nucleonics Week*, 12/10, 19/10, 26/10, 2/11, 16/11, 14/12; *Radio Ukraine World Service*, in *BBC Monitoring Summary of World Broadcasts*, 13/10; *Die Presse*, 2/11; *Libération*, 2/11; *Die Welt*, 3/11; *Financial Times*, 3/11; *Frankfurter Allgemeine Zeitung*, 4/11; *Standard* [Vienna], 4/11; *Neue Zürcher Zeitung*, 6/11; *Daily Telegraph*, 8/11; *Reuter's*, 11/11, 2/12; *New York Times*, 21/12)

- Also in Ukraine, Zaporizhzhya-6 went critical on 6 October. With 950-MW, this unit is said to make the Zaporizhzhya plant the world's largest operating nuclear power station, consisting of six VVER-1000 pressurised water reactor units with a total maximum output of 5,700-MW. Construction work on Zaporizhzhya-6 had been halted by a moratorium on nuclear construction that was adopted in 1991. In 1993 the Ukrainian parliament voted to allow unfinished nuclear power reactors to be completed. The unit is understood to have been finished by Ukraine without any foreign assistance. (*NucNet News*, 6/10; *Nucleonics Week*, 19/10)

- In the **United Kingdom** plans to build three new nuclear power stations, two at Sizewell, and one at Hinkley Point, have been discontinued on the stated grounds that there is a surplus generating capacity and electricity prices are low. In the **United States**, on the other hand, the production price of nuclear-generated electricity is said to have fallen for the seventh successive year, to 2 cents per kWh, as against that of coal-generated power at 1.92 cents per kWh. (**Nuclear Energy Insight**, November, in **UI News Briefing**, 95.50; **Financial Times**, 12/12; **Independent**, 12/12; **Nucleonics Week**, 14/12)

i. Weapons-related Developments in Nuclear-Weapon States

- A spokesman for the navy of the **Russian Federation** has denied a report in the Japanese newspaper *Tokyo Shimbun* of 17 October, which cited material in Russian naval archives that would indicate that in 1983 a collision had occurred in Russian territorial waters near Wladiwostok between a Victor II-class Soviet nuclear submarine and a 'Han'-class boat from **China** that supposedly was on a spying mission. The paper says that the Chinese submarine sank with a loss of 70 lives, and that as late as six years after the accident strong radioactivity had been measured at the collision site. (**Reuter's**, 17/10, 18/10; **Süddeutsche Zeitung**, 18/10)
- During the illness of **Russia's** President Yeltsin, in October, a struggle is said to have broken out among senior Russian officials, about control of the communications link to the country's nuclear weapons. Reportedly, Prime Minister Chernomyrdin wanted to take control but was prevented from doing so by members of the President's entourage, notably General Alexandr Korzhakov, head of the presidential bodyguard. (**Sunday Times**, 29/10)
- In the **United States**, the Department of Energy (DoE) has adopted a dual-track strategy in deciding which option to adopt for the production of tritium. The less expensive option is said to be the use of commercial light-water reactors. The alternative of building a proton accelerator, which initially was said to be DoE's preferred approach, has been denounced by Republican members of Congress, where a group known as 'House Speaker Gingrich's Task Force on Tritium Production' has said that the accelerator option is unproven and unnecessarily expensive, and has accused DoE of pursuing a 'no-nukes policy' and wasting taxpayers' money. The group want DoE to pay more attention to the reactor option than it has been doing so far, and consider the possibility of either acquiring a ('triple-play') light-water reactor to produce tritium, burn excess plutonium and generate power — as also advocated by industry — or of leasing tritium production services at an existing reactor. While acknowledging that the accelerator option is the least mature and is among the most expensive alternatives, DoE reportedly argues that an accelerator would not produce high-level radioactive waste, would benefit scientific research and would meet fewer regulatory problems. As matters stand currently, DoE would not opt for the construction of a reactor especially for the production of tritium; press reports have it that if the reactor option is chosen, the preferred course would be to buy or lease an existing reactor built for commercial purposes. A consultant's report commissioned by DoE notes that major nuclear utilities are interested in this

approach and estimates that the cost of buying irradiation services would be lower than buying a reactor, especially if more than two existing commercial reactors are used. The report has already been questioned by supporters of the 'triple-play' solution. One company, ABB Combustion Engineering, maintains that building a large-scale advanced light-water reactor would be the most economic solution. The operator of a nuclear power station not far from the DoE's Savannah River site has offered his station for conversion to tritium production, while noting that doing so would imply a departure from the traditional US policy to maintain a clear separation between civil and military uses of nuclear energy. A final decision is to be made within three years, but the issue in contention is what funds should be allocated for preliminary studies of any of the options. (**International Herald Tribune**, 12/10; **Nucleonics Week**, 12/10, 19/10, 9/11; **SpentFUEL**, 16/10; **Energy Daily**, 16/11)

- The **United States** may have spent huge sums to develop weapons in response to bogus threats from the Soviet Union. Recent press reports speak of billions of dollars being spent to counter non-existing weapon systems, about which information that had been fabricated by Soviet double agents pretending to work for the CIA had been conveyed to senior US defense officials. Allegedly, even after CIA officials became aware that the sources were unreliable, they continued to pass on their information to the highest levels, without alerting them to the problem. As a result great efforts seem to have been made to respond to 'worst-case scenarios' that were largely imaginary. (**International Herald Tribune**, 3/11)

j. Proliferation-related Developments

- On 15 December a contract was signed in New York between the **Democratic People's Republic of Korea** and the Korean Peninsula Energy Development Organization (KEDO) on the supply of two 1000-MW light-water reactors, at a total cost of \$4.5 billion. The reactors are expected to be completed in 2003. The (South) Korean Electric Power Corp. is to be the prime contractor and an American firm, to be selected in open competition, will be the programme coordinator.

Reportedly, the DPRK will repay the costs of the project (of which South Korea is expected to contribute \$3 billion, Japan \$1 billion, and the US and other KEDO members, \$500,000 — all amounts being approximate as the precise cost of the project is apparently not yet known) interest-free over 20 years, in cash, cash equivalent or through transfer of goods. KEDO is reported to be responsible for providing fuel for the two reactors and for handling the fuel irradiated in them. Among additional items to be provided by KEDO are a radioactive waste storage building for low- and medium-level waste, and the initial fuel loading and technical support services.

The contract is said to specify that the DPRK will continue to refrain from operating the 5-MW reactor and from completing the two large graphite-moderated reactors it was constructing. It is also said to have agreed not to reprocess the fuel it will irradiate in the light-water reactors or to increase the enrichment level of nuclear material used in or produced through the use of any item transferred in connection with those reactors. Among other obligations reportedly accepted by the DPRK in the contract is the undertaking to permit the IAEA to resume

the inspection of facilities not covered by the nuclear freeze; to remain a party to the NPT; and to comply fully with the safeguards agreement when a 'significant portion' of the project is completed but before delivery of key nuclear components. Reportedly, also, when the delivery of those components begins, the DPRK will transfer the spent fuel from the 5-MW reactor, and when the first LWR is completed it will start to dismantle the graphite-moderated reactors. Dismantling should be completed when the second LWR is completed.

The report on the signing of the contract did not confirm earlier news that KEDO might also provide the DPRK with various items of infrastructure, which had been said to raise the cost of the project to US\$6 billion. Apparently, Pyongyang has retracted at least part of its demands in that respect.

The understandings as reported would seem to confirm a prior report from Seoul, that American and South Korean officials had sought to include in the relevant agreement a clause specifying that special inspections could be made of nuclear facilities in the North on which no notifications have been submitted. The special inspections would take place when major parts of the reactors are supplied, presumably in late 1998 or early 1999. At the time, the DPRK was said to have rejected this requirement, maintaining that the issue of special inspections should be discussed between itself and the United States.

A tentative decision is said to have been taken on the site for the power station. It is hoped that ground may be broken at the site in April but a date for that event has not been set. A third site survey team was sent to the area on 16 December and is expected to stay there for about a month. Further surveys of the geological features of the site will be made prior to a final decision.

The European Union has decided to participate in KEDO. The size of the contribution was not immediately determined. Several member states, among them Finland, Greece, Italy, the Netherlands and the UK, have already pledged individual contributions. There is a report that KEDO is facing financial difficulties, in part because of the cost of the oil supplies it is committed to make to the DPRK.

According to the *Korean Central News Agency*, in Pyongyang, the US and KEDO have so far delivered 150,000 tons of heavy oil, pursuant to the agreed framework. The agency said that as long as the US discharges its obligations under the agreed framework, the DPRK would do so too. In 1996, the DPRK is to receive 500,000 tons of oil.

The IAEA has disclosed that the DPRK has refused to allow it to measure the plutonium level for the 8,000 irradiated fuel rods in storage but it has apparently agreed to permit the Agency to ascertain whether the rods have been used.

A senior officer defecting from the DPRK army has said in Seoul that the country's new leader, Kim Jong Il does not have complete control of the country, in particular of the armed forces. Allegedly, the main reason is that his leadership qualities are in question, especially because of his supposedly disorderly private life and temperamental personality. There are also reports that Mr. Kim is in poor health. Yet other reports maintain that he is progressively assuming all top functions. The fact that, according to a news agency report from Seoul, Kim Jong Il recently

made a statement denouncing economic and democratic reformers as traitors, might indicate that he is facing political opposition.

The UN World Food Program initially supplied the DPRK with 5,140 tons of rice for distribution among the people greatest affected by the worst floods in a century, which have destroyed homes, farmland and food stocks in rural areas, and are estimated to have wiped out 40 per cent of arable land in the country. Early UN reports said that 1.5 million tons of grain had been lost, but the newest estimate from Pyongyang speaks of 3.2 million tons. Much of the rice crop also seems to have been destroyed. There are reports of 500,000 people having been made homeless. It is said to be the first time that the country has accepted food assistance from the United Nations. The World Food Program is reported to have borrowed the funds it needed for the initial supplies, and with only \$200,000 on hand, from Denmark and Finland, of the \$8.8 million which it says it needs, the organisation announced in mid-December that it would have to stop further supplies unless Western nations quickly pledged more funds. As this seems not to have been the case, at the time this issue of the *Newsbrief* went to press the World Food Program had suspended its supplies. There were reports, however, that Japan might be willing to provide emergency food assistance. The Republic of Korea had first ruled out assisting the North unless it reopened the dialogue with the South, ceased its anti-Seoul rhetoric and officially asked for aid. Seoul now seems to have eased its conditions by calling on Pyongyang to 'prove' that there is a food crisis and to promise not to transfer donated rice to the army. According to a source in South Korea, Chinese leaders are concerned that the famine and other economic problems might prompt Pyongyang to start an armed conflict with the South, to divert potential unrest. Similar concern is said to exist among American and South Korean intelligence services, which reportedly have noted air force units and artillery from the North being moved closer to the demilitarised zone and recognise the possibility that Pyongyang might force a conflict by occupying some Southern territory where no forces are stationed. South Korea is said to have put some of its forces on alert.

At a meeting in Osaka, in mid-November, of the Asia-Pacific Economic Cooperation Forum the foreign ministers of Japan, the Republic of Korea and the United States announced that they would consult more closely about ways to restrain the DPRK's nuclear-weapon efforts. A first senior-level meeting on the subject would be held in January.

The Team Spirit exercises customarily conducted each year by South Korean and American military forces have been suspended for the second year in a row.

(**KBS Radio** [Seoul], 26/9, 8/10, 12/11, in **BBC Monitoring Service of World Broadcasts**; **Hanguk Ilbo** [Seoul], 9/10; **International Herald Tribune**, 14-15/10, 15/11, 16/11, 18-19/11, 22/11, 16-17/12; **Choson Ilbo** [Seoul], 31/10, 19/11; **Financial Times**, 8/11; **BBC Monitoring Summary of World Broadcasts**, 14/11 in **UI News Briefing**, 95.46; **Reuter's**, 21/11; **Agence Europe** [Brussels], 22/11; **New York Times**, 24/11, 14/12, 16/12, 19/12, 26/12, 28/12, 31/12; **Arms Control Today**, November; **Nucleonics Week**, 21/12; **Economist**, 23/12; **National Public Radio** [US] newscast 25/12; **NuclearFuel**, 1/1/96)

- In China a spokesman for the Foreign Ministry has stated that there is no cooperation between his country and **Iran** that is not under IAEA safeguards. The spokesman stated at a press conference that China had never exported any sensitive technology or equipment concerning reprocessing and enrichment of uranium and production of heavy water. He also denied the report of 'a British newspaper' (presumably the *Sunday Times* article referred to below — ed.) that China was constructing an enrichment facility in Iran. At a hearing before the International Relations Committee of the US House of Representatives, senior State Department officials have drawn attention to the unwillingness of a number of countries (not specifically named, but it was implied that they included friends and allies of the US) to cooperate with the US to curtail Iran's nuclear programme. The officials did say that Chinese companies were helping Iran develop chemical weapons. There is reputed to be concern in Washington that to compensate for the great cut-back in expenditure on conventional armament which is said to have taken place in Iran, that country may take recourse to the development of weapons of mass destruction, including nuclear weapons. The US Administration was initially seen as opposed to a proposal by Republican Senator D'Amato to make it mandatory for the government to retaliate against any foreign firm that sells Iran oil-industry equipment or know-how, but it is now working with congressional Republicans on similar legislation, although with apparent reluctance. The Administration is said to be strongly opposed to a proposal by the Speaker of the House of Representatives, Gingrich, to devote \$18 million for the establishment of a secret intelligence programme to destabilise Iran's government. The plan is thought to be supported by the House Permanent Select Committee on Intelligence. (*Xinhua News Agency* [Beijing], 26/9, in *BBC Monitoring Service*; *Washington Post*, 12/10, 19/11; *Sunday Times*, 15/10; *New York Times*, 10/11; *International Herald Tribune*, 11/11)
- Once again, the issue of lifting the trade sanctions against **Iraq** that were imposed after the war in the Persian Gulf, has been a focus of international attention. On 5 October, Iraqi Deputy Prime Minister Tariq Aziz stated that his country had fully cooperated with the UN in line with resolutions 687 and 715. This, however, does not appear to coincide with the views of the organisations which oversee the implementation of those resolutions. The semi-annual report of the IAEA on the implementation of its plan for the ongoing monitoring and verification of Iraq's nuclear activities, which was submitted to the Security Council on 6 October, speaks of the continuing absence of documentation concerning important parts of Iraq's covert nuclear programme and says that there is no certainty that all nuclear relevant documents have been delivered. Also in October, Ambassador Rolf Ekéus, Executive Chairman of the United Nations Special Commission (UNSCOM), was understood to have advised the Security Council that Iraq had seriously and persistently misled the UN about the scale of its programmes for the construction of weapons of mass destruction. According to this report, of which the validity has been repeatedly denied by Baghdad, Iraq had been concealing proscribed activities and, consequently, some of the assessments in UNSCOM's earlier reports had to be reassessed. The report mentioned, among other things, that Iraq had made an effort to develop radiological weapons with cobalt-60 and caesium, for

dispersal among opposing forces. The extent to which it had succeeded in that attempt does not yet seem to be fully known. Reportedly, three bombs containing irradiated zirconium oxide were tested but the dispersal of the material on detonation was too limited to be of practical use against enemy forces. A number of the bomb cases are said not to have been accounted for. Iraq had also concealed a large-scale biological-weapons programme and mass production of the advanced chemical warfare agent known as VX. Among issues raised in the report was the failure of Iraq to provide definite figures on amounts of the biological agents produced, weaponised and destroyed. There was also said to be no certainty that all the chemical-weapon precursors had indeed been located and dealt with. In late December there was a report from Amman that Jordanian officials had seized a shipment of chemicals bound for Iraq that could be used in the production of chemical warfare agents.

Ambassador Ekéus also revealed that since the UN embargo was imposed, the Iraqi government, using a covert network of purchasing agents and dummy companies, had once again bought a range of key components of missiles, machine tools to produce missile engine parts, and other technologies that might be used in the production of short-range missiles as well as (expressly proscribed) medium-range ones. The information, which appears to be based to a large extent on American sources, was said to reflect a far-reaching and remarkably successful effort to rebuild important parts of the country's former military capabilities. As recently as December, Jordanian authorities were reported to have intercepted a \$25 million shipment of Russian-made guidance components for missiles intended for Iraq. In this connection, Ambassador Ekéus produced for the Security Council a gyroscope that had been retrieved from a canal in Baghdad, where it apparently had been deposited to avoid detection. The device was said to be similar to those intercepted by Jordan a few weeks earlier. The situation was taken to be indicative of a continuing Iraqi effort to produce a long-range missile system.

In light of these and similar disclosures, the Security Council has decided to continue the trade sanctions, on the grounds that Iraq could still not be considered to have made sufficient progress in meeting demands imposed by the Council.

There have been unconfirmed press reports about a Syrian national working as an interpreter for UNSCOM being an Iraqi intelligence agent. The man's double role is said to have been disclosed by Gen. Hussein Kamel, Saddam Hussein's son-in-law, during a meeting with Ambassador Ekéus. Reportedly, he is not the only spy among members of UNSCOM's inspection force. The UN's Baghdad office is also said to be vulnerable to penetration by Iraqi intelligence.

In the so-called 'Ordtec Case' before a British appeals court, the claim has been made that for years the British government turned a blind eye to clandestine arms deals with Iraq. The case concerned an appeal brought by four British businessmen convicted on charges of illegal arms trade with Iraq, at least one of whom is said to have been acting on behalf of British intelligence, reporting on the activities of terrorist groups and on illicit arms deals. Reportedly, the Government had been aware of the situation but had withheld evidence that might disclose its involvement. The convictions were overturned on the basis that they were 'unsafe and unsatisfactory'. Paul

Grecian, one of the four men involved, is now being held in South Africa, pending extradition to the United States on charges similar to those of which he was acquitted in the UK.

The results of the inquiries conducted by Sir Richard Scott into a number of similar cases will become known in the early new year. They are generally expected to show that members of the British government were aware of trade in embargoed items being conducted with Iraq by several British firms, and may even have encouraged it.

Earlier in 1995 it was reported that Iraqi scientists visiting the European Nuclear Research Centre (Centre Européen de Recherche Nucléaire or CERN) in past years may have sought information there on the possible uses of magnets in the enrichment of uranium by means of electromagnetic isotope separation — the so-called calutron process. The senior Iraqi scientist said to have been involved has since become minister of military industry and deputy chairman of Iraq's Atomic Energy Commission.

(*Il Giornale* [Milan], 5/5, in *FBIS-TAC-95-003*, 29/6; **Republic of Iraq Radio in BBC Monitoring Summary of World Broadcasts**, 6/10; **Reuter's**, 11/10; **Standard** [Vienna], 12/10; **Washington Post**, 12/10, 14/10, 8/11; **International Herald Tribune**, 13/10, 16/10, 9/11; **New York Times**, 19/10, 9/11, 9/12, 22/12, 28/12; **Independent**, 24/10; **Daily Telegraph**, 30/10, 31/10; **Financial Times**, 31/10, 8/11; **Guardian**, 31/10, 8/11, 23/12; **Newsweek**, 6/11; **Times** [London], 8/11; **Daily Telegraph**, 8/11; **Neue Zürcher Zeitung**, 9/11; **US News and World Report**, 13/11)

- It has been reported recently that in 1991, **Pakistan** tried to buy ring magnets in Germany of a type used for the enrichment of uranium by gas-centrifuge. The parts were of the same description as the ones obtained earlier by **Iraq**, but the two cases are not thought to have been connected, nor does there appear to be evidence that Pakistan ever helped Iraq in its centrifuge design efforts.

According to an item in the Indian daily *The Hindu* of 4 January, the US Administration has obtained Congressional approval for setting up a seismic facility in Pakistan to monitor nuclear tests in the region. A commentary by K. Subrahmanyam in New Delhi asserts that this measure cannot pertain to India (sic) and must therefore be directed at Iran. The author says that it will add 'one more irritant to Pakistan-Iranian relationship'.

(*Times of India*, 7/1; *Nucleonics Week*, 16/11)

- Military authorities in the **Republic of Korea** have denied reports apparently emanating from opposition members of the South Korean parliament, that in the late 1970s the country was close to the completion of a nuclear weapon. According to these allegations, President Park Chung Hee had said in 1978 that the country's Agency for Defense Development was producing nuclear weapons, 'on the basis of French technology'. Reportedly, the military junta that seized power after President Park was assassinated in 1979 scrapped the programme. The report echoes similar allegations that were made several years ago, according to which the programme had been 95 per cent complete when it was terminated. (**Times** [London], 6/10; **Süddeutsche Zeitung**, 6/10; **International Herald Tribune**, 7/10)

- In October a book appeared in **South Africa** which alleges that the country did not just produce six nuclear bombs but 'at least 24', in addition to 'hundreds of tactical nuclear shells'; there is also mention of 'grapefruit-sized neutron bombs'. The latter are claimed to have been manufactured with the use of 'red mercury'. According to the authors, Peter Hounam, and Steve McQuillan, investigative journalists from the UK and South Africa, respectively, only six bombs were destroyed as announced, while most of the weapons have been sent abroad — mostly to Israel and the United States — and five have been retained by right-wing military as a bargaining chip to obtain a 'white homeland'. South African officials and politicians have categorically denied that there is any truth in the story. (**Citizen** [Johannesburg] 20/10; **Standard** [London] 22/10)

k. Illicit Nuclear Trafficking

This subtitle, retained from previous issues for the sake of convenience, is used here also to cover other actions relating to clandestinely obtained material, besides commercial transactions.

- Two men were arrested at the border between the **Czech Republic** and **Poland**, trying to smuggle containers of radioactive material into the latter country. The material in the containers is said to have been strontium, rather than uranium, as originally suspected. (**Guardian**, 9/11)
- On the charge of illegal possession of fissile material, a court in **Germany** has sentenced Adolf Jaekle, who was apprehended last year in Tengen, near Konstanz, with a sample of plutonium-239, to a prison term of two-and-a-half years. (Reports that he was sentenced to five-and-a-half years in prison seem to follow from the fact that he was also found guilty of forgery and fraud). Jaekle does not seem to have tried to sell the material to anyone else. The source of the material has still not been established. The Swiss businessman from whom Jaekle claims he got it has denied this under oath. An intelligence report that the material came from the Democratic People's Republic of Korea has not been substantiated. It appears that there are still strong indications that the German foreign intelligence agency may have been a prime mover in the case of the plutonium-239 which was illegally transported by air from Moscow to Munich in the summer of 1994. Euratom is said to have agreed with German authorities to send the material to Russia, allowing experts there to take a sample and analyse it to try and determine its origin. An official of Russia's *Gosatombnadzor* (GAN), which is responsible for nuclear materials and accounting, is quoted as saying that the country's Ministry of Atomic Energy (Minatom) had no basis for its categorical denial that the material could have been diverted from a Russian facility, as the quantity involved was far below that unaccounted for in its facilities. It is reported from Moscow, however, that GAN itself lacks the technical means, the political authority and the funds to take physical inventory of Russia's nuclear material stockpiles. (**Financial Post**, 24/11, in **UI News Briefing 95.48**; **New York Times**, 24/11; **Süddeutsche Zeitung**, 24/11; **Nucleonics Week**, 30/11, 21/12; **NuclearFuel**, 18/12, 1/1/96)
- In **Germany**, the news magazine *Der Stern* has alleged that police are looking for a quantity of eight kilograms of plutonium that are supposed to be concealed in or near

Berlin. The same source claims that an even greater amount of plutonium is on deposit in Brussels, pending the outcome of ongoing negotiations about its sale. (*Der Stern*, 18/10; *Frankfurter Allgemeine Zeitung*, 19/10)

- In **Russia** a senior official of the Interior Ministry has said that in 1995 there have been no known cases of theft of weapons-grade nuclear material. According to this official, the incidents registered in the previous two years involved workers in nuclear industry rather than organized crime. The statement followed one from the Russian Foreign Intelligence Service, that this organization was not aware of a single case of weapons-grade nuclear material being smuggled out of Russia. One of the persons convicted for his part in smuggling 350 grammes of plutonium into Germany in 1994 has revealed that the material originated at the Institute of Physics & Power Engineering in Obninsk, not far from Moscow which is said to have an inventory of over one metric ton of plutonium. Most of this is said to be weapon-grade and some of it is in powder form and used in experimental fuel. In apparent contradiction to the statement from the Interior Ministry, it is reported that Russian organised crime was behind the theft in 1993 of radioactive beryllium — a material used in the manufacture of nuclear warheads — from a Russian nuclear laboratory and the attempt to sell it abroad. The material is currently said to be in Lithuania, where police first seized it. US news organisations allege that the beryllium was to have been sold to 'an Austrian middleman' who had a buyer for the material who was ready to pay \$24 million, i.e., ten times its legitimate market value. Rumour has it that the customer was 'Korean'.

Dzhohar Dudayev, the Chechen separatist leader, has announced his supporters had 'a nuclear weapons capability'. The announcement came shortly before Chechen nationals led a Russian television reporter to a box buried in Moscow's Izmailovsky park that was said to have contained a small quantity of Caesium-137 — an Austrian news paper speaks of '32 kg', but this may have included the weight of the container. Dudayev said that there were three more parcels hidden at various locations in Moscow, containing radioactive material along with conventional explosives to disperse it. Reportedly, Chechen separatists have obtained access to radiological sources from an inventory of nuclear waste at the Chechen capital Grozny. There are reports that US intelligence had previously warned that Chechen separatists might try to launch a terrorist attack on Russian nuclear facilities. Threats against Russian nuclear installations are also reported to have been received direct from Chechen rebels.

(*Informatsionnoye Agentstvo Ekho Moskvyy*, 10/5, in *FBIS-TAC-95-003*, 29/6; *Associated Press*, 14/10; *Age*, [Melbourne], 16/10; *Post-Soviet Nuclear Defense and Monitor*, 31/10; *Nucleonics Week*, 9/11; *Kurier*, 24/11; *New York Times*, 25/11; *NuclearFuel*, 4/12)

- Specialists from **Russia** and the **USA** have been co-operating for a year on the development of a computerised stock-control system for nuclear material. Installation of the equipment at the Obninsk Physicoenergetics Institute is said to have been complete. Reportedly, the system is intended as the prototype for similar devices for the safekeeping, monitoring and stock control of weapons-grade material at other installations. (*Rossiyskaya Gazeta*, 21/4, 18/10)

- In the **United States** the Attorney General of the State of New York has called for state law to provide the mandatory death penalty for anyone found in the unauthorised possession of fissionable material or triggering devices for nuclear weapons. (*New York Times*, 14/12)

i. Environmental Issues

- **Russian Federation:** Sources in Norway report that at the Russian port of Severodvinsk on the White Sea, idled nuclear submarines with spent fuel on board have been docked for a long time, some of them for as long as eight years. A Norwegian ship building company is said to be making plans for their decommissioning. According to the same source, at one of the fjords of the Kola Peninsula, 100 reactor cores from submarines are stockpiled. There are reports that nuclear experts from France and the UK are advising Russian authorities how to dispose of damaged fuel rods from nuclear icebreakers that are currently stored in the hull of an old freighter in Murmansk Harbour, and a joint venture of French and German firms has been formed to assist in the clean-up of spent fuel and other waste from nuclear submarines. In October, Russian secret police are said to have raided the offices in Moscow and Murmansk of the Norwegian environmental group *Bellona*, which has studied the extensive waste-disposal problems in the northern coastal regions of Russia, as a result of the wholesale disposal there of decommissioned submarines, reactor cores, and other radioactive wastes. The reason given for the raids was that the organization had published 'state secrets'. It is feared that this reaction may discourage international co-operation in solving what is seen as an ever more serious and urgent problem. Reportedly, cash shortages have held up the pay of workers at the nuclear power station in the peninsula, adding to the concern about safety. (*Times* [London], 17/10; *Sunday Telegraph*, 29/10; *Nucleonics Week*, 16/11, 7/12; *NuclearFuel*, 4/12)

m. Miscellaneous

- The 1995 **Nobel Peace Prize** has been awarded to Dr. Joseph Rotblat, President of the Pugwash Conferences on Science and World Affairs and to that organisation, in equal parts. Although the *Communique from the Nobel Committee* does not say so, it is said that the award was made in part in protest against the ongoing Chinese and French nuclear tests. The move is said to have caused annoyance in French official quarters and has prompted Prime Minister Juppé to declare that it will have no effect on policies his country has adopted in its national interest. Dr. Rotblat has said that the worldwide 'avalanche of protest' against the French tests is likely to have the result that there will indeed be a comprehensive test ban treaty in 1996. (*International Herald Tribune*, 14-15/10; *New York Times*, 12/11; *Communique from the Nobel Committee*, as distributed by Pugwash)
- The Australian Prime Minister, Paul J. Keating, has established the *Canberra Commission on the Elimination of Nuclear Weapons*, 'to develop ideas and proposals for a concrete and realistic programme to achieve a world totally free of nuclear weapons'. It is to 'propose practical steps towards a nuclear weapons-free world including the related problem of maintaining stability and security during the transitional period and after this goal is accomplished.' The Commission will meet three or four times beginning early in the new year in Australia and is to

report to the Prime Minister by 31 August 1996. The Australian government intends to submit the report of the Commission to the 1996 UN General Assembly and the Conference on Disarmament. Members of the Commission include Ambassador Jayantha Dhanapala, President of the 1995 NPT Review and Extension Conference, (and a member of the Core Group of PPNN, ed.) and Dr. Joseph Rotblat (see previous item). The Commission is chaired by Ambassador Richard Butler, Permanent Representative of Australia to the United Nations in New York. (**Statement by the Prime Minister of Australia**, Canberra, 26/11)

- It appears that a deal has been struck in the **United States** between the Administration and the Chairman of the Senate Foreign Relations Committee, Republican Senator Jesse Helms, that could allow work on the ratification of the START II Treaty to proceed and decisions to be taken on 18 ambassadorial nominations. Sen. Helms has so far refused to have his Committee deal with these matters, pending the abolition of the US Information Agency, the Agency for International Development, and the Arms Control and Disarmament Agency. Apparently there now is agreement that the Administration will submit within six months a plan for the consolidation of the three agencies, at a savings of \$1.7 billion over five years. (**United Press International**, 17/11)
- Also in the **United States**, there are indications that 560 kg of Uranium-234 oxide, which by the end of World War II had been on its way from Germany to Japan in a submarine that surrendered to American forces when the war in Europe ended, was used in the *Manhattan Project* in manufacturing one of the early nuclear weapons. (**New York Times**, 31/12)

II. PPNN Activities

- PPNN was founded in 1987 with the immediate objective of helping to facilitate a positive outcome to the 1990 NPT review conference. Its second phase of activities, running from 1991 to 1995, was focused initially upon regional aspects of nuclear proliferation and non-proliferation, and then upon facilitating a smooth and long extension of the Treaty at its 1995 review and extension conference. In January 1996 a third phase of its activities will commence, in which it will seek to facilitate the implementation of the two collateral decision documents on *Principles and Objectives* and *Strengthening the Review Process* agreed at the 1995 conference, as well as continuing with its existing publication, conference and PPNN Core Group activities. Applications were made in the summer of 1995 to past funders of PPNN for financial assistance in taking its work until the end of 1997. Grants for the future activities of PPNN have recently been received from the W. Alton Jones Foundation, the John D. and Catherine T. MacArthur Foundation, the Prospect Hill Foundation and the Japanese Atomic Energy Relations Organisation. These, plus a grant for 1996 received from the Rockefeller Brothers Foundation in late 1994, will guarantee a continuation of PPNN's activities into early 1997. Other applications are still under consideration; if successful, these would enable the Programme to continue until the end of that year. By then, plans should be in place for the period to 2000.

- From 12 to 17 October the PPNN Core Group held its 18th semi-annual meeting, at the Chilworth Manor Conference Centre of the University of Southampton, UK.
- From 12 to 14 October, the Core Group meeting took the form of an international workshop on *Nuclear Non-Proliferation and the Middle East*. This was attended by 15 invited participants and observers, and was chaired by Ben Sanders, Executive Chairman of PPNN. The workshop was structured around a keynote address by Dr Mohamed Shaker, Ambassador of Egypt to the UK on *Nuclear Weapons in the Middle East - Retrospect and Prospect* [CGII/130]. Four papers/presentations were made: *Nuclear Facilities and IAEA Verification Modalities in the Middle East* by Dr Mohamed ElBaradei, from the IAEA [CGII/131]; *Other Weapons of Mass Destruction in the Middle East* by Dr. Abdullah Toukan, presented by Major General Fikri Shishani from Jordan [CGII/132]; *Proposals for Preventing the Proliferation of Nuclear Weapons in the Middle East* by Ambassador Amar Bendjama from Algeria [CGII/133]; and *Building Confidence - Preparing for a Zone Free of Weapons of Mass Destruction* by Ambassador James Leonard from the USA and Dr Jan Prawitz from Sweden [CGII/134].
- The Core Group itself, five of its former members, plus two invited speakers, met from 14 to 17 October. It undertook an extensive review of the current proliferation and non-proliferation situation, but devoted the majority of its time to *The Consequences of the 1995 NPT Conference*. Six papers/presentations were made: *The 1995 NPT Conference* by Jayantha Dhanapala [CGII/135]; *The Consequences of the 1995 Conference for the NPT: The Yardsticks for Non-Proliferation and Disarmament* by Peter Goosen [CGII/136]; *The Consequences of the 1995 Conference for the NPT: The Enhanced Review Process* by Sven Jurschewsky [CGII/137]; *The Nuclear Non-Proliferation Regime after the NPT Conference* by Ben Sanders [CGII/138]; *The Consequences of the 1995 NPT Conference and PPNN's Tasks for the Future* by John Simpson [CGII/139]; and *The Role and Future of NGOs in the Non-Proliferation Process* by Larry Scheinman [CGII/140].

Copies of papers presented at the Chilworth workshops and other PPNN publications can be obtained from the Southampton Office of PPNN.

- Ambassador Davidson Hepburn of the Bahamas, a member of PPNN's Core Group from 1991 through 1995, has been awarded the French decoration of the Légion d'Honneur.

III. Recent Publications

Books

Peter Auer, *Von Dahlem nach Hiroshima - Die Geschichte der Atombombe*, Aufbau Verlag, Berlin, 336 pp.

James Brown (ed.), (with contributions by Ian Anthony; Marie Isabelle Chevrier; Thérèse Delpech; David Fischer; Maynard W. Glitman; Françoise de la Gorce; Gregory G. Govan; David Hafemeister; Tan Han; John D. Holum; Steve Kadner and Elizabeth Turpen; Ephraim Kam; Geoffrey Kemp; Sang-Beom Kim; Ronald F. Lehman II; Michael McCwire; David R. Markov; Peggy Mason; Graham S. Pearson; Mitchell Reiss; Amy Sands; Harold P. Smith, Jr.; Richard Starr and Brendon Hammer; Adolfo R. Taylhardat; Gordon K. Vachon; Pierre Villaras; and Atsumasa

Yamamoto), *Old Issues and New Strategies in Arms Control and Verification*, Free University, Amsterdam, 396 pp.

Theodore A. Coulombis and Thanos P. Dokos, *Arms Control and Security in the Middle East and the CIS Republics*, Hellenic Foundation for European and Foreign Policy, Athens, 339 pp.

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IV. Documentation

i. Text of a Treaty on an African Nuclear-Weapon-Free Zone Treaty [text reproduced from A/50/426, 13 September]

Letter of transmittal

2 August 1995

Sir,

I have the honour to refer to General Assembly resolution 49/138 of 19 December 1994 on the establishment of an African nuclear-weapon-free zone. In paragraph 9 of that resolution, the Assembly requests the Secretary-General, in consultation with the Organization of African Unity, to take appropriate action to enable the Group of Experts designated by the United Nations in cooperation with the Organization of African Unity to meet jointly with the Intergovernmental Group of Experts of the Organization of African Unity early in 1995 at Pretoria in order to finalize the drafting of a treaty on a nuclear-weapon-free zone in Africa, and to submit the text of the treaty to the General Assembly at its fiftieth session under the item entitled 'Final text of a treaty on an African nuclear-weapon-free zone'.

Following this resolution, the United Nations, in cooperation with the Organization of African Unity (OAU), organized the Joint Meeting of OAU/United Nations Group of Experts and the Intergovernmental Group of Experts to finalize the drafting of a treaty on a nuclear-weapon-free zone in Africa. The Joint Meeting was held at Johannesburg from 29 May to 2 June 1995.

I am pleased to inform your Excellency that the Joint Meeting adopted the Pelindaba text of the African Nuclear-Weapon-Free Zone Treaty. In my capacity as Chairman of the Meeting, I submitted the Pelindaba text to the Secretary-General of OAU, who in turn submitted it to the OAU Council of Ministers at its Sixty-second Ordinary Session held at Addis Ababa from 21 to 23 June 1995. After considering the Pelindaba text, the OAU Council of Ministers made some amendments and thereafter adopted resolution OAU CM/Res.1592 (LXII)/Rev.1. Subsequently, the Pelindaba text, as amended, was approved by the thirty-first Ordinary Session of the OAU Assembly of Heads of State and Government. Therefore, the text which I am submitting to your Excellency is the Pelindaba text as amended by the OAU Council of Ministers and subsequently approved by the OAU Assembly of Heads of State and Government.

At the opening session of the Joint Meeting, Mr. L. H. Evans, Director-General of the Department of Foreign Affairs of South Africa, delivered the keynote address. Statements were also made by Ambassador Oluoyemi Adeniji, Chairman of the Group of Experts, Ambassador Ibrahima Sy, Representative of the Organization of African Unity to the United Nations, and by Mr. Sola Ogunbanwo, Chief Expert Adviser on the African Nuclear-Weapon-Free Zone. The closing session in Pelindaba was addressed by Dr. J. W. L. de Villiers, Chairman of the Atomic Energy Corporation of South Africa, Dr. W. E. Stumpf, Chief Executive of the Atomic Energy Corporation of South Africa, Ambassador Oluoyemi Adeniji, Ambassador Ibrahima Sy, and by Mr. Sola Ogunbanwo.

The following experts took part in the Joint Meeting: Ambassador Oluoyemi Adeniji, Chairman of the Group of Experts, Lagos; Ambassador Dr. Fathi Marei, Advisor on Arms Control to the Minister of Foreign Affairs, Cairo; Ambassador Abdelmohammed Abdelhalim, Embassy of Sudan, Addis Ababa; Mr. Komi Menshah Afeto, Premier Counsellor, Permanent Mission of Togo to the United Nations, New York; Monsieur Sabri Boukadoum, Director, International Policy,

Ministry of Foreign Affairs, Algeria; Mr. P. Goosen, Minister (Disarmament), Permanent Mission of South Africa to the United Nations, Geneva, Switzerland; Mr. Essombe Edimo Joseph, First Secretary, Embassy of Cameroon, Addis Ababa; Mr. Kabouji Lukabu, Chargé d'affaires, Permanent Mission of Zaire to the United Nations, New York; Mrs. Liberata Mulamula, Counsellor, International Cooperation and Legal Affairs Department, Dar-es-Salaam; Mr. J. Nayeck, Second Secretary, Permanent Mission of Mauritius to the United Nations, New York; Mr. Arthur Pickering, Under-Secretary, Ministry of Foreign Affairs, Windhoek; Mr. Gift Punungwe, Chargé d'affaires, High Commission of Zimbabwe, Lagos; Ambassador Cheickh Sylla, Director, International Organizations Department, Ministry of Foreign Affairs, Dakar; Dr. Tilahun W. Selassie, General Manager of National Radiation Protection Authority, Science and Technology Commission, Addis Ababa; Ambassador Ibrahima Sy, Executive Secretary, Office of OAU, New York; and Colonel Gustave Zoula, Senior Military Officer, Military Unit, Conflict Division, Organization of African Unity, Addis Ababa.

Mr. Mohamed Elbaradei, Assistant Director-General for External Relations, International Atomic Energy Agency (IAEA), participated as an expert; and Ms. Bronte Moules, Alternative Representative on the Australian delegation to the Conference on Disarmament, participated as an expert observer from a party to the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga).

The following representatives of the host Government attended the Meeting as observers: Mr. Johann Kellerman, Assistant-Director, Directorate, Disarmament and Nuclear Matters, Department of Foreign Affairs, South Africa and Mr. Neville Whiting, Atomic Energy Corporation of South Africa.

At the request of the Group of Experts, the representatives of France, Portugal, Spain, the United Kingdom of Great Britain and Northern Ireland and the United States of America addressed the Meeting, on 1 June. The representative of the Russian Federation addressed the Meeting on 2 June. The representative of China addressed a letter to the Group.

The members of the Group of Experts wish to express their appreciation for the assistance that they received from the staff members of the Secretariat of the United Nations. They wish, in particular, to convey their special thanks to the Secretary of the Group of Experts, Mr. Sola Ogunbanwo, Senior Coordinator of the United Nations Disarmament Fellowship, Training and Advisory Service programme, who also participated as Chief Expert Adviser. (Signed) Oluoyemi ADENIJI

Ambassador, Chairman of the Group of Experts to Prepare a Draft Treaty on an African Nuclear-Weapon-Free Zone

Pelindaba Text of the African Nuclear-Weapon-Free Zone Treaty

The Parties to this Treaty,

Guided by the Declaration on the Denuclearization of Africa, adopted by the Assembly of Heads of State and Government of the Organization of African Unity (hereinafter referred to as OAU) at its first ordinary session, held at Cairo from 17 to 21 July 1964 (AHG/RES.11(1)), in which they solemnly declared their readiness to undertake, through an international agreement to be concluded under United Nations auspices, not to manufacture or acquire control of nuclear weapons,

Guided also, by the resolutions of the fifth-fourth and fifty-sixth ordinary sessions of the Council of Ministers of OAU, held at Abuja from 27 May to 1 June 1991 and at Dakar from 22 to 28 June 1992 respectively, (CM/RES.1342 (LIV) and CM/RES.1395 (LVI)), which affirmed that the evolution of the international situation was conducive to the implementation of the Cairo Declaration as well as the relevant provisions of the 1986 OAU Declaration on Security, Disarmament and Development,

Recalling United Nations General Assembly resolution 3472 B (XXX) of 11 December 1975, in which it considered nuclear-weapon-free zones one of the most effective means for preventing the proliferation, both horizontal and vertical, of nuclear weapons,

Convinced of the need to take all steps in achieving the ultimate goal of a world entirely free of nuclear weapons, as well as of the obligations of all States to contribute to this end,

Convinced also that the African nuclear-weapon-free zone will constitute an important step towards strengthening the non-

proliferation regime, promoting cooperation in the peaceful uses of nuclear energy, promoting general and complete disarmament and enhancing regional and international peace and security.

Aware that regional disarmament measures contribute to global disarmament efforts,

Believing that the African nuclear-weapon-free zone will protect African States against possible nuclear attacks on their territories,

Noting with satisfaction existing NWFZs and recognizing that the establishment of other NWFZs, especially in the Middle East, would enhance the security of States Parties to the African NWFZ,

Reaffirming the importance of the Treaty on the Non-Proliferation of Nuclear Weapons (hereinafter referred to as the NPT) and the need for the implementation of all its provisions,

Desirous of taking advantage of article IV of the NPT, which recognizes the inalienable right of all States Parties to develop research on, production and use of nuclear energy for peaceful purposes without discrimination and to facilitate the fullest possible exchange of equipment, materials and scientific and technological information for such purposes,

Determined to promote regional cooperation for the development and practical application of nuclear energy for peaceful purposes in the interest of sustainable social and economic development of the Africa continent,

Determined to keep Africa free of environmental pollution by radioactive wastes and other radioactive matter,

Welcoming the cooperation of all States and governmental and non-governmental organizations for the attainment of these objectives,

Have decided by this treaty to establish the African NWFZ and hereby agree as follows:

Article 1

Definition/Usage of terms

For the purpose of this Treaty and its Protocols:

- (a) 'African nuclear-weapon-free zone' means the territory of the continent of Africa, islands States members of OAU and all islands considered by the Organisation of African Unity in its resolutions to be part of Africa;
- (b) 'Territory' means the land territory, internal waters, territorial seas and archipelagic waters and the airspace above them as well as the sea bed and subsoil beneath;
- (c) 'Nuclear explosive device' means any nuclear weapon or other explosive device capable of releasing nuclear energy, irrespective of the purpose for which it could be used. The term includes such a weapon or device in unassembled and partly assembled forms, but does not include the means of transport or delivery of such a weapon or device if separable from and not an indivisible part of it;
- (d) 'Stationing' means implantation, emplacement, transport on land or inland waters, stockpiling, storage, installation and deployment;
- (e) 'Nuclear installation' means a nuclear-power reactor, a nuclear research reactor, a critical facility, a conversion plant, a fabrication plant, a reprocessing plant, an isotope separation plant, a separate storage installation and any other installation or location in or at which fresh or irradiated nuclear material or significant quantities of radioactive materials are present.
- (f) 'Nuclear material' means any source material or special fissionable material as defined in Article XX of the Statute of the International Atomic Energy Agency (IAEA) and as amended from time to time by the IAEA.

Article 2

Application of the Treaty

1. Except where otherwise specified, this Treaty and its Protocols shall apply to the territory within the African nuclear-weapon-free zone, as illustrated in the map in annex I.
2. Nothing in this Treaty shall prejudice of in any way affect the rights, or the exercise of the rights, of any state under international law with regards to freedom of the seas.

Article 3

Renunciation of nuclear explosive devices

Each Party undertakes:

- (a) Not to conduct research on, develop, manufacture, stockpile of otherwise acquire, possess or have control over any nuclear explosive device by any means anywhere;

- (b) Not to seek or receive any assistance in the research on, development, manufacture, stockpiling or acquisition, or possession of any nuclear explosive device;
- (c) Not to take any action to assist or encourage the research on, development, manufacture, stockpiling or acquisition, or possession of any nuclear explosive device.

Article 4

Prevention of stationing of nuclear explosive devices

1. Each Party undertakes to prohibit, in its territory, the stationing of any nuclear explosive device.
2. Without prejudice to the purposes and objectives of the treaty, each party in the exercise of its sovereign rights remains free to decide for itself whether to allow visits by foreign ships and aircraft to its ports and airfields, transit of its airspace by foreign aircraft, and navigation by foreign ships in its territorial sea of archipelagic waters in a manner not covered by the rights of innocent passage, archipelagic sea lane passage or transit passage of straits.

Article 5

Prohibition of testing of nuclear explosive devices

Each Party undertakes:

- (a) Not to test any nuclear explosive device;
- (b) To prohibit in its territory the testing of any nuclear explosive device;
- (c) Not to assist or encourage the testing of any nuclear explosive device by any State anywhere.

Article 6

Declaration, dismantling, destruction or conversion of nuclear explosive devices and the facilities for their manufacture

Each Party undertakes:

- (a) To declare any capability for the manufacture of nuclear explosive devices;
- (b) To dismantle and destroy any nuclear explosive devices that it has manufactured prior to the coming into force of this treaty;
- (c) To destroy facilities for the manufacture of nuclear explosive devices or, where possible, to convert them to peaceful uses;
- (d) To permit the International Atomic Energy Agency (hereinafter referred to as IAEA) and the Commission established in article 12 to verify the processes of dismantling and destruction of the nuclear explosive devices, as well as the destruction or conversion of the facilities for their production.

Article 7

Prohibition of dumping of radioactive wastes

Each Party undertakes:

- (a) To effectively implement or to use as guidelines the measures contained in the Bamako Convention on the Ban of the Import into Africa and Control of Transboundary Movement and Management of Hazardous Wastes within Africa in so far as it is relevant to radioactive waste;
- (b) Not to take any action to assist or encourage the dumping of radioactive wastes and other radioactive matter anywhere within the African nuclear-weapon-free zone.

Article 8

Peaceful nuclear activities

1. Nothing in this treaty shall be interpreted as to prevent the use of nuclear science and technology for peaceful purposes.
2. As part of their efforts to strengthen their security, stability and development, the Parties undertake to promote individually and collectively the use of nuclear science and technology for economic and social development. To this end they undertake to establish and strengthen mechanisms for cooperation at the bilateral, subregional and regional levels.
3. Parties are encouraged to make use of the programme of assistance available in IAEA and, in this connection, to strengthen cooperation under the African Regional Cooperation Agreement for Research, Training and Development related to Nuclear Science and Technology (hereinafter referred to as AFRA).

Article 9**Verification of Peaceful Uses**

Each Party undertakes:

- (a) To conduct all activities for the peaceful use of nuclear energy under strict non-proliferation measures to provide assurance of exclusively peaceful uses;
- (b) To conclude a comprehensive safeguards agreement with IAEA for the purpose of verifying compliance with the undertakings in subparagraph (a) of this article;
- (c) Not to provide source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material for peaceful purposes to any non-nuclear-weapon State unless subject to a comprehensive safeguards agreement concluded with IAEA.

Article 10**Physical protection of nuclear materials and facilities**

Each Party undertakes to maintain the highest standards of security and effective physical protection of nuclear materials, facilities and equipment to prevent theft or unauthorized use and handling. To that end each Party, *inter alia*, undertakes to apply measures of physical protection equivalent to those provided for in the Convention on Physical Protection of Nuclear Material and in recommendations and guidelines developed by IAEA for that purpose.

Article 11**Prohibition of armed attack on nuclear installations**

Each Party undertakes not to take, or assist, or encourage any action aimed at an armed attack by conventional or other means against nuclear installations in the African nuclear-weapon-free zone.

Article 12**Mechanism for compliance**

1. For the purpose of ensuring compliance with their undertakings under this Treaty, the Parties agree to establish the African Commission of Nuclear Energy (hereafter referred to as the Commission) as set out in annex III.
2. The Commission shall be responsible *inter alia* for:
 - (a) Collating the reports and the exchange of information as provided for in article 13;
 - (b) Arranging consultations as provided for in annex IV, as well as convening conferences of Parties on the concurrence of simple majority of State Parties on any matter arising from the implementation of the Treaty;
 - (c) Reviewing the application to peaceful nuclear activities of safeguards by IAEA as elaborated in annex II;
 - (d) Bringing into effect the complaints procedure elaborated in annex IV;
 - (e) Encouraging regional and sub-regional programs for cooperation in the peaceful uses of nuclear science and technology;
 - (f) Promoting international cooperation with extra-zonal States for the peaceful uses of nuclear science and technology.
3. The Commission shall meet in ordinary session once a year, and may meet in extraordinary session as may be required by the complaints and settlement of disputes procedure in annex IV.

Article 13**Report and exchanges of information**

1. Each Party shall submit an annual report to the Commission on its nuclear activities as well as other matters relating to the Treaty, in accordance with the format for reporting to be developed by the Commission.
2. Each Party shall promptly report to the Commission any significant event affecting the implementation of the Treaty.
3. The Commission shall request the IAEA to provide it with an annual report on the activities of AFRA.

Article 14**Conference of Parties**

1. A Conference of all Parties to the Treaty shall be convened by the Depository as soon as possible after the entry into force of the Treaty to, *inter alia*, elect members of the Commission and determine its headquarters. Further conferences of State Parties shall be held as necessary and at least every two years, and convened in accordance with paragraph 2 (b) of article 12.

2. The Conference of all Parties to the Treaty shall adopt the Commission's budget and a scale of assessment to be paid by the State Parties.

Article 15**Interpretation of the Treaty**

Any dispute arising out of the interpretation of the Treaty shall be settled by negotiation, by recourse to the Commission or another procedure agreed to by the Parties, which may include recourse to an arbitral panel or to the International Court of Justice.

Article 16**Reservations**

This Treaty shall not be subject to reservations.

Article 17**Duration**

This Treaty shall be of unlimited duration and shall remain in force indefinitely.

Article 18**Signature, ratification and entry into force**

1. This Treaty shall be open for signature by any state in the African nuclear-weapon-free zone. It shall be subject to ratification.
2. It shall enter into force on the date of deposit of the twenty-eighth instrument of ratification.
3. For a signatory that ratifies this Treaty after the date of the deposit of the twenty-eighth instrument of ratification, it shall enter into force for that signatory on the date of deposit of its instrument of ratification.

Article 19**Amendments**

1. Any amendments to the Treaty proposed by a Party shall be submitted to the Commission, which shall circulate it to all Parties.
2. Decision on the adoption of such an amendment shall be taken by a two-thirds majority of the Parties either through written communication to the Commission or through a conference of Parties convened upon the concurrence of a simple majority.
3. An amendment so adopted shall enter into force for all parties after receipt by the Depository of the instrument of ratification by the majority of Parties.

Article 20**Withdrawal**

1. Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events, related to the subject-matter of this Treaty, have jeopardized its supreme interests.
2. Withdrawal shall be effected by a Party giving notice, which includes a statement of the extraordinary events it regards as having jeopardized its supreme interest, twelve months in advance to the Depository. The Depository shall circulate such notice to all other parties.

Article 21**Depository functions**

1. This Treaty, of which the Arabic, English, French and Portuguese texts are equally authentic, shall be deposited with the Secretary-General of OAU, who is hereby designated as Depository of the Treaty.
2. The Depository shall:
 - (a) Receive instruments of ratification;
 - (b) Register this Treaty and its Protocols pursuant to article 102 of the Charter of the United Nations;
 - (c) Transmit certified copies of the Treaty and its Protocols to all states in the African nuclear-weapon-free zone and to all states eligible to become party to the Protocols to the Treaty, and shall notify them of signatures and ratification of the Treaty and its Protocols.

Article 22**Status of the annexes**

The annexes form an integral part of this Treaty. Any reference to this Treaty includes the annexes.

Annex I

[see map overleaf]

- Treaty and in consultation with the Chairman, shall designate the Executive Secretary of the Commission. For the first meeting a quorum shall be constituted by representatives of two thirds of the Members of the Commission. For that meeting decisions of the Commission shall be taken as far as possible by consensus or otherwise by a two-thirds majority of the Members of the Commission. The Commission shall adopt its rules of procedure at that meeting.
3. The Commission shall develop a format for reporting by States as required under articles 12 and 13.
 4. (a) The budget of the Commission, including the costs of inspections pursuant to annex IV to this Treaty, shall be borne by the Parties to the Treaty in accordance with a scale of assessment to be determined by the Parties;
 - (b) The Commission may also accept additional funds from other sources provided such donations are consistent with the purposes and objectives of the Treaty;

Annex IV

Complaints procedure and settlement of disputes

1. A Party which considers that there are grounds for a complaint that another Party or a Party to Protocol III is in breach of its obligations under this Treaty shall bring the subject-matter of the complaint to the attention of the Party complained of and shall allow the latter thirty days to provide it with an explanation and to resolve the matter. This may include technical visits agreed upon between the Parties.
2. If the matter is not so resolved, the complainant Party may bring this complaint to the Commission.
3. The Commission, taking account of efforts made under paragraph 1 above, shall afford the Party complained of forty-five days to provide it with an explanation of the matter.
4. If, after considering any explanation given to it by the representatives of the Party complained of, the Commission considers that there is sufficient substance in the complaint to warrant an inspection in the territory of that Party or territory of a party to Protocol III, the Commission may request the International Atomic Energy Agency to conduct such inspection as soon as possible. The Commission may also designate its representatives to accompany the Agency's inspection team.
 - (a) The request shall indicate the tasks and objectives of such inspection, as well as any confidentiality requirements;
 - (b) If the Party complained of so requests, the inspection team shall be accompanied by representatives of that Party provided that the inspectors shall not be thereby delayed or otherwise impeded in the exercise of their functions;
 - (c) Each Party shall give the inspection team full and free access to all information and places within each territory that may be deemed relevant by the inspectors to the implementation of the inspection;
 - (d) The Party complained of shall take all appropriate steps to facilitate the work of the inspection team, and shall accord them the same privileges and immunities as those set forth in the relevant provisions of the Agreement on the Privileges and Immunities of the International Atomic Energy Agency;
 - (e) The International Atomic Energy Agency shall report its findings in writing as quickly as possible to the Commission, outlining its activities, setting out relevant facts and information as ascertained by it, with supporting evidence and documentation as appropriate, and stating its conclusions. The Commission shall report fully to all States Parties to the Treaty giving its decision as to whether the Party complained of is in breach of its obligations under this Treaty;
 - (f) If the Commission considers that the Party complained of is in breach of its obligations under this Treaty, or that the above provisions have not been complied with, States Parties to the Treaty shall meet in extraordinary session to discuss the matter;
 - (g) The States Parties convened in extraordinary session may as necessary, make recommendations to the Party held to be in breach of its obligations and to the Organization of African Unity. The Organization of African Unity may, if necessary, refer the matter to the United Nations Security Council;

- (h) The costs involved in the procedure outlined above shall be borne by the Commission. In the case of abuse, the Commission shall decide whether the requesting State Party should bear any of the financial implications.
5. The Commission may also establish its own inspection mechanisms.

Protocol I

The Parties to this Protocol,

Convinced of the need to take all steps in achieving the ultimate goal of a world entirely free of nuclear weapons as well as the obligations of all States to contribute to this end,

Convinced also that the African Nuclear-Weapon-Free Zone Treaty, negotiated and signed in accordance with the Declaration on the Denuclearization of Africa (AHG/Res.11(1)) of 1964, resolutions CM/Res.1342(LIV) of 1991 and CM/Res.1395(LVI) Rev. 1 of 1992 of the Council of Ministers of the Organization of African Unity and United Nations General Assembly Resolution 48/86 of 16 December 1993, constitutes an important measure towards ensuring the non-proliferation of nuclear weapons, promoting cooperation in the peaceful uses of nuclear energy, promoting general and complete disarmament, and enhancing regional and international peace and security,

Desirous of contributing in all appropriate manners to the effectiveness of the Treaty,

Have agreed as follows:

Article 1

Each Protocol Party undertakes not to use or threaten to use a nuclear explosive device against:

- (a) Any Party to the Treaty; or
- (b) Any territory within the African nuclear-weapon-free zone for which a State that has become a Party to Protocol III is internationally responsible as defined in annex I.

Article 2

Each Protocol Party undertakes not to contribute to any act that constitutes a violation of the Treaty or of this Protocol.

Article 3

Each Protocol Party undertakes, by written notification to the Depository, to indicate its acceptance or otherwise of any alteration to its obligation under this Protocol that may be brought about by the entry into force of an amendment to the Treaty pursuant to article 20 of the Treaty.

Article 4

This Protocol shall be open for signature by China, France, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

Article 5

This Protocol shall be subject to ratification.

Article 6

This Protocol is of a permanent nature and shall remain in force indefinitely, provided that each party shall, in exercising its national sovereignty, have the right to withdraw from this Protocol if it decides that extraordinary events, related to the subject-matter of this Protocol, have jeopardized its supreme interests. It shall give notice of such withdrawal to the Depository twelve months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

Article 7

This Protocol shall enter into force for each State on the date of its deposit with the Depository of its instrument of ratification or the date of entry into force of the Treaty, which ever is later.

In witness whereof the undersigned, being duly authorised by their Governments, have signed this Protocol.

Protocol II

The Parties to this Protocol,

Convinced of the need to take all steps in achieving the ultimate goal of a world entirely free of nuclear weapons as well as the obligations of all States to contribute to this end,

Convinced also that the African Nuclear-Weapon-Free Zone Treaty, negotiated and signed in accordance with the Declaration on the Denuclearization of Africa (AHG/Res.11(1)) of 1964,

resolutions CM/Res.1342(LIV) of 1991 and CM/Res.1395(LVI) Rev.1 of 1992 of the Council of Ministers of the Organization of African Unity and United Nations General Assembly resolution 48/86 of 16 December 1993, constitutes an important measure towards ensuring the non-proliferation of nuclear weapons, promoting cooperation in the peaceful uses of nuclear energy, promoting general and complete disarmament, and enhancing regional and international peace and security,

Desirous of contributing in all appropriate manners to the effectiveness of the Treaty,

Bearing in mind the objective of concluding a treaty banning all nuclear tests,

Have agreed as follows:

Article 1

Each Protocol Party undertakes not to test or assist or encourage the testing of any nuclear explosive device anywhere within the African nuclear-weapon-free zone.

Article 2

Each Protocol Party undertakes not to contribute to any act that constitutes a violation of the Treaty or of this Protocol.

Article 3

Each Protocol Party undertakes, by written notification to the Depository, to indicate its acceptance or otherwise of any alteration to its obligation under this Protocol that may be brought about by the entry into force of an amendment to the Treaty pursuant to article 20 of the Treaty.

Article 4

This Protocol shall be open for signature by China, France, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

Article 5

This Protocol shall be subject to ratification.

Article 6

This Protocol is of a permanent nature and shall remain in force indefinitely, provided that each Party shall, in exercising its national sovereignty, have the right to withdrawal from this Protocol if it decides that extraordinary events, related to the subject-matter of this Protocol, have jeopardized its supreme interests. It shall give notice of such withdrawal to the Depository twelve months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

Article 7

This Protocol shall enter into force for each State on the date of its deposit with the Depository of its instrument of ratification or the date of entry into force of the Treaty, whichever is later.

In witness whereof the undersigned, being duly authorised by their Governments, have signed this Protocol.

Protocol III

The Parties to this Protocol,

Convinced of the need to take all steps in achieving the ultimate goal of a world entirely free of nuclear weapons as well as the obligations of all States to contribute to this end,

Convinced also that the African Nuclear-Weapon-Free Zone Treaty, negotiated and signed in accordance with the Declaration on the Denuclearization of Africa (AHG/Res.11(1)) of 1964, resolutions CM/Res.1342(LIV) of 1991 and CM/Res.1395(LVI) Rev.1 of 1992 of the Council of Ministers of the Organization of African Unity and United Nations General Assembly resolution 48/86 of 16 December 1993, constitutes an important measure towards ensuring the non-proliferation of nuclear weapons, promoting cooperation in the peaceful uses of nuclear energy, promoting general and complete disarmament, and enhancing regional and international peace and security,

Desirous of contributing in all appropriate manners to the effectiveness of the Treaty,

Have agreed as follows:

Article 1

Each Protocol Party undertakes to apply, in respect of the territories for which it is de jure or de facto internationally responsible situated within the African nuclear-weapon-free zone, the provisions

contained in articles 3,4,5,6,7,8,9 and 10 of the Treaty and to ensure the application of safeguards specified in annex II of the Treaty.

Article 2

Each Protocol Party undertakes not to contribute to any act that constitutes a violation of the Treaty or of this Protocol.

Article 3

Each Protocol Party undertakes, by written notification to the Depository, to indicate its acceptance or otherwise of any alterations to its obligation under this Protocol that may be brought about by the entry into force of an amendment to the Treaty pursuant to article 20 of the Treaty.

Article 4

This Protocol shall be open for signature by France and Spain.

Article 5

This Protocol shall be subject to ratification.

Article 6

This Protocol is of a permanent nature and shall remain in force indefinitely provided that each Party shall, in exercising its national sovereignty have the right to withdraw from this Protocol if it decides that extraordinary events, related to the subject-matter of this Protocol, have jeopardized its supreme interests. It shall give notice of such withdrawal to the Depository twelve months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

Article 7

This Protocol shall enter into force for each State on the date of its deposit with the Depository of its instrument of ratification or the date of entry into force of the Treaty, whichever is later.

In witness whereof the undersigned, being duly authorised by their Governments have signed this Protocol.

ii. Treaty on the Southeast Asia Nuclear Weapon-Free Zone

[text reproduced from the ASEAN Summit press release]

The States Parties to this Treaty:

Desiring to contribute to the realization of the purposes and principles of the Charter of the United Nations;

Determined to take concrete action which will contribute to the progress towards general and complete disarmament of nuclear weapons, and to the promotion of international peace and security;

Reaffirming the desire of the Southeast Asian States to maintain peace and stability in the region in the spirit of peaceful coexistence and mutual understanding and cooperation as enunciated in various communiques, declarations and other legal instruments;

Recalling the Declaration on the Zone of Peace, Freedom and Neutrality (ZOPFAN) signed in Kuala Lumpur on 27 November 1971 and the Programme of Action on ZOPFAN adopted at the 26th ASEAN Ministerial Meeting in Singapore in July 1993;

Convinced that the establishment of a Southeast Asia Nuclear Weapon-Free Zone, as an essential component of the ZOPFAN, will contribute towards strengthening the security of States within the Zone and towards enhancing international peace and security as a whole;

Reaffirming the importance of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in preventing the proliferation of nuclear weapons and in contributing towards international peace and security;

Recalling Article VII of the NPT which recognizes the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories;

Recalling the Final Document of the Tenth Special Session of the United Nations General Assembly which encourages the establishment of nuclear weapon-free zones;

Recalling the Principles and Objectives for Nuclear Non-Proliferation and Disarmament, adopted at the 1995 Review and Extension Conference of the Parties to the NPT, that the cooperation of all the nuclear-weapon States and their respect and support for the relevant protocols is important for the maximum effectiveness of this nuclear weapon-free zone treaty and its relevant protocol;

Determined to protect the region from environmental pollution and the hazards posed by radioactive wastes and other radioactive material;

Have agreed as follows:

*Article 1
Use of Terms*

For the purposes of this Treaty and its Protocol:

- (a) 'Southeast Asia Nuclear Weapon-Free Zone', hereinafter referred to as the 'Zone', means the area comprising the territories of all States in Southeast Asia, namely, Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam, and their respective continental shelves and Exclusive Economic Zones (EEZ);
- (b) 'territory' means the land territory, internal waters, territorial sea, archipelagic waters, the seabed and the sub-soil thereof and the airspace above them;
- (c) 'nuclear weapon' means any explosive device capable of releasing nuclear energy in an uncontrolled manner but does not include the means, transport or delivery of such device, if separable from and not an indivisible part thereof;
- (d) 'station' means to deploy, emplace, emplant, install, stockpile or store;
- (e) 'radioactive material' means material that contains radionuclides above clearance or exemption levels recommended by the International Atomic Energy Agency (IAEA);
- (f) 'radioactive wastes' means material that contains or is contaminated with radionuclides at concentrations or activities greater than clearance levels recommended by the IAEA and for which no use is foreseen; and
- (g) 'dumping' means
 - (i) any deliberate disposal at sea, including seabed, and subsoil insertion of radioactive wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea, and
 - (ii) any deliberate disposal at sea, including seabed and subsoil insertion, of vessels, aircraft, platforms or other man-made structures at sea containing radioactive material,
 but does not include the disposal of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea, operating for the purpose, of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft, platforms or structures.

*Article 2
Application of the Treaty*

1. This Treaty and its Protocol shall apply to the territories, continental shelves and EEZ of the States Parties within the Zone in which the Treaty is in force.
2. Nothing in this Treaty shall prejudice the rights or the exercise of these rights by any State under the provisions of the United Nations Convention on the Law of the Sea of 1982, in particular with regard to freedom of the high seas, rights of innocent passage, archipelagic sea lanes passage or transit passage of ships and aircraft, and consistent with the Charter of the United Nations.

*Article 3
Basic Undertakings*

1. Each State Party undertakes not to, anywhere inside or outside the Zone:
 - (a) develop, manufacture or otherwise acquire, possess or have control over nuclear weapons;
 - (b) station or transport nuclear weapons by any means; or
 - (c) test or use nuclear weapons.
2. Each State Party also undertakes not to allow, in its territory, any other State to:
 - (a) develop, manufacture or otherwise acquire, possess or have control over nuclear weapons;
 - (b) station nuclear weapons; or
 - (c) test or use nuclear weapons.
3. Each State Party also undertakes not to:
 - (a) dump at sea or discharge into the atmosphere anywhere within the Zone any radioactive material or wastes;
 - (b) dispose radioactive material or wastes on land in the territory of or under the jurisdiction of other States except as stipulated in Paragraph 2(e) of Article 4; or

- (c) allow, within in territory, any other State to dump at sea or discharge into the atmosphere any radioactive material or wastes.
4. Each State Party undertakes not to:
 - (a) seek or receive any assistance in the commission of any act in violation of the provisions of Paragraphs 1, 2 and 3 of this Article; or
 - (b) take any action to assist or encourage the commission of any act in violation of the provisions of Paragraphs 1, 2 and 3 of this Article.

*Article 4
Use of Nuclear Energy for Peaceful Purposes*

1. Nothing in this Treaty shall prejudice the right of the States Parties to use nuclear energy, in particular for their economic development and social progress.
2. Each State Party therefore undertakes:
 - (a) to use exclusively for peaceful purposes nuclear material and facilities which are within its territory and areas under its jurisdiction and control;
 - (b) prior to embarking on its peaceful nuclear energy programme, to subject its programme to rigorous nuclear safety assessment conforming to guidelines and standards recommended by the IAEA for the protection of health and minimization of danger to life and property in accordance with Paragraph 6 of Article III of the Statute of the IAEA;
 - (c) upon request, to make available to another State Party the assessment except information relating to personal data, information protected by intellectual property rights or by industrial or commercial confidentiality, and information relating to national security;
 - (d) to support the continued effectiveness of the international non-proliferation system based on the Treaty on Non-Proliferation of Nuclear Weapons (NPT) and the IAEA safeguards system; and
 - (e) to dispose radioactive wastes and other radioactive material in accordance with IAEA standards and procedures on land within its territory or on land within the territory of another State which has consented to such disposal.
3. Each State Party further undertakes not to provide source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material to:
 - (a) any non-nuclear-weapon State except under conditions subject to the safeguards required by Paragraph I of Article III of the NPT; or
 - (b) any nuclear-weapon State except in conformity with applicable safeguards agreements with the IAEA.

*Article 5
IAEA Safeguards*

Each State Party which has not done so shall conclude an agreement with the IAEA for the application of full scope safeguards to its peaceful nuclear activities not later than eighteen months after the entry into force for that State Party of this Treaty.

*Article 6
Early Notification of a Nuclear Accident*

Each State Party which has not acceded to the Convention on Early Notification of a Nuclear Accident shall endeavour to do so.

*Article 7
Foreign Ships and Aircraft*

Each State Party, on being notified, may decide for itself whether to allow visits by foreign ships and aircraft to its ports and airfields, transit of its airspace by foreign aircraft, and navigation by foreign ships through its territorial sea or archipelagic waters and overflight of foreign aircraft above those waters in a manner not governed by the rights of innocent passage, archipelagic sea lanes passage or transit passage.

*Article 8
Establishment of the Commission for the Southeast Asia Nuclear Weapon-Free Zone*

1. There is hereby established a Commission for the Southeast Asia Nuclear Weapon-Free Zone, hereinafter referred to as the 'Commission'.

2. All States Parties are *ipso facto* members of the Commission. Each State Party shall be represented by its Foreign Minister or his representative accompanied by alternates and advisers.
3. The function of the Commission shall be to oversee the implementation of this Treaty and ensure compliance with its provisions.
4. The Commission shall meet as and when necessary in accordance with the provisions of this Treaty including upon the request of any State Party. As far as possible, the Commission shall meet in conjunction with the ASEAN Ministerial Meeting.
5. At the beginning of each meeting, the Commission shall elect its Chairman and such other officers as may be required. They shall hold office until a new Chairman and other officers are elected at the next meeting.
6. Unless otherwise provided for in this Treaty, two-thirds of the members of the Commission shall be present to constitute a quorum.
7. Each member of the Commission shall have one vote.
8. Except as provided for in this Treaty, decisions of the Commission shall be taken by consensus or, failing consensus, by a two-thirds majority of the members present and voting.
9. The Commission shall, by consensus, agree upon and adopt rules of procedure for itself as well as financial rules governing its funding and that of its subsidiary organs.

Article 9

The Executive Committee

1. There is hereby established, as a subsidiary organ of the Commission, the Executive Committee.
2. The Executive Committee shall be composed of all States Parties to this Treaty. Each State Party shall be represented by one senior official as its representative, who may be accompanied by alternates and advisers.
3. The functions of the Executive Committee shall be to:
 - (a) ensure the proper operation of verification measures in accordance with the provisions on the Control System as stipulated in Article 10;
 - (b) consider and decide on requests for clarification and for a fact-finding mission;
 - (c) set up a fact-finding mission in accordance with the Annex of this Treaty;
 - (d) consider and decide on the findings of a fact-finding mission and report to the Commission;
 - (e) request the Commission to convene a meeting when appropriate and necessary;
 - (f) conclude such agreements with the IAEA or other international organizations as referred to in Article 18 on behalf of the Commission after being duly authorized to do so by the Commission; and
 - (g) carry out such other tasks as may, from time to time, be assigned by the Commission.
4. The Executive Committee shall meet as and when necessary for the efficient exercise of its functions. As far as possible, the Executive Committee shall meet in conjunction with the ASEAN Senior Officials Meeting.
5. The Chairman of the Executive Committee shall be the representative Chairman of the Commission. Any submission or communication made by a State Party to the Chairman of the Executive Committee shall be disseminated to the other members of the Executive Committee.
6. Two-thirds of the members of the Executive Committee shall be present to constitute a quorum.
7. Each member of the Executive Committee shall have one vote.
8. Decisions of the Executive Committee shall be taken by consensus or, failing consensus, by two-thirds of the members present and voting.

Article 10

Control System

1. There is hereby established a control system for the purpose of verifying compliance with the obligations of the States Parties under this Treaty.
2. The Control System shall comprise:
 - (a) the IAEA safeguards system as provided for in Article 5;
 - (b) report and exchange of information as provided for in Article 11;
 - (c) request for clarification as provided for in Article 12; and

- (d) request and procedures for a fact-finding mission as provided for in Article 13.

Article 11

Report and Exchange of Information

1. Each State Party shall submit reports to the Executive Committee on any significant event within its territory and areas under its jurisdiction and control affecting the implementation of this Treaty.
2. The States Parties may exchange information on matters arising under or in relation to this Treaty.

Article 12

Request for Clarification

1. Each State Party shall have the right to request another State Party for clarification concerning any situation which may be considered ambiguous or which may give rise to doubts about the compliance of that State Party with this Treaty. It shall inform the Executive Committee of such a request. The requested State Party shall duly respond by providing without delay the necessary information and inform the Executive Committee of its reply to the requesting State Party.
2. Each State Party shall have the right to request the Executive Committee to seek clarification from another State Party concerning any situation which may be considered ambiguous or which may give rise to doubts about compliance of that State Party with this Treaty. Upon receipt of such a request, the Executive Committee shall consult the State Party from which clarification is sought for the purpose of obtaining the clarification requested.

Article 13

Request for a Fact-Finding Mission

A State Party shall have the right to request the Executive Committee to send a fact-finding mission to another State Party in order to clarify and resolve a situation which may be considered ambiguous or which may give rise to doubts about compliance with the provisions of this Treaty, in accordance with the procedure contained in the Annex to this Treaty.

Article 14

Remedial Measures

1. In case the Executive Committee decides in accordance with the Annex that there is a breach of this Treaty by a State Party, that State Party shall, within a reasonable time, take all steps necessary to bring itself in full compliance with this Treaty and shall promptly inform the Executive Committee of the action taken or proposed to be taken by it.
2. Where a State Party fails or refuses to comply with the provisions of Paragraph 1 of this Article, the Executive Committee shall request the Commission to convene a meeting in accordance with the provisions of Paragraph 3(e) of Article 9.
3. At the meeting convened pursuant to Paragraph 2 of this Article, the Commission shall consider the emergent situation and shall decide on any measure it deems appropriate to cope with the situation, including the submission of the matter to the IAEA and, where the situation might endanger international peace and security, the Security Council and the General Assembly of the United Nations.
4. In the event of breach of the Protocol attached to this Treaty by a State Party to the Protocol, the Executive Committee shall convene a special meeting of the Commission to decide on appropriate measures to be taken.

Article 15

Signature, Ratification, Accession, Deposit and Registration

1. This Treaty shall be open for signature by all States in Southeast Asia, namely, Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.
2. This Treaty shall be subject to ratification in accordance with the constitutional procedure of the signatory States. The instruments of ratification shall be deposited with the Government of the Kingdom of Thailand which is hereby designated as the Depositary State.
3. This Treaty shall be open for accession. The instruments of accession shall be deposited with the Depositary State.
4. The Depositary State shall inform the other States Parties to this Treaty on the deposit of instruments of ratification or accession.

5. The Depositary State shall register this Treaty and its Protocol pursuant to Article 102 of the Charter of the United Nations.

Article 16
Entry Into Force

1. This Treaty shall enter into force on the date of the deposit of the seventh instrument of ratification and/or accession.
2. For States which ratify or accede to this Treaty after the date of this seventh instrument of ratification or accession, the Treaty shall enter into force on the date of deposit of its instrument of ratification or accession.

Article 17
Reservations

This Treaty shall not be subject to reservations.

Article 18
Relations with Other International Organizations

The Commission may conclude such agreements with the IAEA or other international organizations as it considers likely to facilitate the efficient operation of the Control System established by this Treaty.

Article 19
Amendments

1. Any State Party may propose amendments to this Treaty and its Protocol and shall submit its proposals to the Executive Committee, which shall transmit them to all the other States Parties. The Executive Committee shall immediately request the Commission to convene a meeting to examine the proposed amendments. The quorum required for such a meeting shall be all the members of the Commission. Any amendment shall be adopted by a consensus decision of the Commission.
2. Amendments adopted shall enter into force 30 days after the receipt by the Deposit State of the seventh instrument of acceptance from the States Parties.

Article 20
Review

Ten years after this Treaty enters into force, a meeting of the Commission shall be convened for the purpose of reviewing the operation of this Treaty. A meeting of the Commission for the same purpose may also be convened at anytime thereafter if there is consensus among all its members.

Article 21
Settlement of Disputes

Any dispute arising from the interpretation of the provisions of this Treaty shall be settled by peaceful means as may be agreed upon by the States Parties to the dispute. If within one month, the parties to the dispute are unable to achieve a peaceful settlement of the dispute by negotiation, mediation, enquiry or conciliation, any of the parties concerned shall, with the prior consent of the other parties concerned, refer the dispute to arbitration or to the International Court of Justice.

Article 22
Duration and Withdrawal

1. This Treaty shall remain in force indefinitely.
2. In the event of a breach by any State Party of this Treaty essential to the achievement of the objectives of this Treaty, every other State Party shall have the right to withdraw from this Treaty.
3. Withdrawal under Paragraph 2 of Article 22, shall be effected by giving notice twelve months in advance to the members of the Commission.

In witness whereof, the undersigned have signed this Treaty.
Done at Bangkok, this fifteenth day of December, one thousand nine hundred and ninety-five, in one original in the English language.

Annex
Procedure for a Fact-Finding Mission

1. The State Party requesting a fact-finding mission as provided in Article 13, hereinafter referred to as the 'requesting State', shall submit the request to the Executive Committee specifying the following:
 - (a) the doubts or concerns and the reasons for such doubts or concerns;
 - (b) the location in which the situation which gives rise to doubts has allegedly occurred;

- (c) the relevant provisions of the Treaty about which doubts of compliance have arisen; and
 - (d) any other relevant information.
2. Upon receipt of a request for a fact-finding mission, the Executive Committee shall:
 - (a) immediately inform the State Party to which the fact-finding mission is requested to be sent, hereinafter referred to as the 'receiving State', about the receipt of the request; and
 - (b) not later than 3 weeks after receiving the request, decide if the request complies with the provisions of Paragraph 1 and whether or not it is frivolous, abusive or clearly beyond the scope of this Treaty. Neither the requesting nor receiving State Party shall participate in such decisions.
3. In case the Executive Committee decides that the request does not comply with the provisions of Paragraph 1, or that it is frivolous, abusive or clearly beyond the scope of this Treaty, it shall take no further action on the request and inform the requesting State and the receiving State accordingly.
4. In the event that the Executive Committee decides that the request complies with the provisions of Paragraph 1, and that it is not frivolous, abusive or clearly beyond the scope of this Treaty, it shall immediately forward the request for a fact-finding mission to the receiving State, indicating, *inter alia*, the proposed date for sending the mission. The proposed date shall not be later than 3 weeks from the time the receiving State receives the request for a fact-finding mission. The Executive Committee shall also immediately set up a fact-finding mission consisting of 3 inspectors from the IAEA who are neither nationals of the requesting nor receiving State.
5. The receiving State shall comply with the request for a fact-finding mission referred to in Paragraph 4. It shall cooperate with the Executive Committee in order to facilitate the effective functioning of the fact-finding mission, *inter alia*, by promptly providing unimpeded access of the fact-finding mission to the location in question. The receiving State shall accord to the members of the fact-finding mission such privileges and immunities as are necessary for them to exercise their functions effectively, including inviolability of all papers and documents and immunity from arrest, detention and legal process for acts done and words spoken for the purpose of the mission.
6. The receiving State shall have the right to take measures to protect sensitive installations and to prevent disclosures of confidential information and data not related to this Treaty.
7. The fact-finding mission, in the discharge of its functions, shall:
 - (a) respect the laws and regulations of the receiving State;
 - (b) refrain from activities inconsistent with the objectives and purposes of this Treaty;
 - (c) submit preliminary or interim reports to the Executive Committee; and
 - (d) complete its task without undue delay and shall submit its final report to the Executive Committee within a reasonable time upon completion of its work.
8. The Executive Committee shall:
 - (a) consider the reports submitted by the fact-finding mission and reach a decision on whether or not there is a breach of this Treaty;
 - (b) immediately communicate its decision to the requesting State and the receiving State; and
 - (c) present a full report on its decision to the Commission.
9. In the event that the receiving State refuses to comply with the request for a fact-finding mission in accordance with Paragraph 4, the requesting State through the Executive Committee shall have the right to request for a meeting of the Commission. The Executive Committee shall immediately request the Commission to convene a meeting in accordance with Paragraph 3(e) of Article 9.

**Protocol to the Treaty on Southeast Asia Nuclear
Weapon-Free Zone**

The States Parties to this Protocol,

Desiring to contribute to efforts towards achieving general and complete disarmament of nuclear weapons, and thereby ensuring international peace and security, including in Southeast Asia;

Noting the Treaty on the Southeast Asia Nuclear Weapon-Free Zone, signed at Bangkok, on the fifteenth day of December, one thousand nine hundred and ninety-five;

Have agreed as follows:

Article 1

Each State Party undertakes to respect the Treaty on the Southeast Asia Nuclear Weapon-Free Zone, hereinafter referred to as the 'Treaty', and not to contribute to any act which constitutes a violation of the Treaty or its Protocol by States Parties to them.

Article 2

Each State Party undertakes not to use or threaten to use nuclear weapons against any State Party to the Treaty. It further undertakes not to use or threaten to use nuclear weapons within the Southeast Asia Nuclear Weapon-Free Zone.

Article 3

This Protocol shall be open for signature by the People's Republic of China, the French Republic, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

Article 4

Each State Party undertakes, by written notification to the Depositary State, to indicate its acceptance or other wise of any alteration to its obligations under this Protocol that may be brought about by the entry into force of an amendment to the Treaty pursuant to Article 19 thereof.

Article 5

This Protocol is of a permanent nature and shall remain in force indefinitely, provided that each State Party shall, in exercising its national sovereignty, have the right to withdraw from this Protocol if it decides that extraordinary events, related to the subject-matter of this Protocol, have jeopardized its supreme national interests. It shall give notice of such withdrawal to the Depositary State twelve months in advance. Such notice shall include a statement of the extraordinary events its regards as having jeopardized its supreme national interests.

Article 6

This Protocol shall be subject to ratification.

Article 7

This Protocol shall enter into force for each State Party on the date of its deposit of its instrument of ratification with the Depositary State. The Depositary State shall inform the other States Parties to the Treaty and to this Protocol on the deposit of instruments of ratification.

In witness whereof the undersigned, being duly authorised by their Governments, have signed this Protocol.

iii. United Nations General Assembly Resolution on the 1995 Review and Extension Conference

[Text reproduced from A/C.1/50/L.49/Rev.1]

The General Assembly,

Recalling its resolution 47/52 A of 9 December 1992, in which it, *inter alia*, took note of the decision of the parties to the Treaty on the Non-Proliferation of Nuclear Weapons, following appropriate consultations, to form a preparatory committee for a conference to

review the operation of the Treaty and to decide on its extension, as provided for in article VIII, paragraph 3, and also called for in article X, paragraph 2, of the Treaty,

Recalling that the parties to the Treaty on the Non-Proliferation of Nuclear Weapons convened in New York from 17 April to 12 May 1995 in accordance with article VIII, paragraph 3, and article X, paragraph 2, of the Treaty,

Noting that, at the time of the Review and Extension Conference, there were one hundred and seventy-five of the one hundred and seventy-eight States parties to the Treaty present,

1. Takes note that on 11 May 1995, the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons adopted three decisions on (1) Strengthening the Review Process for the Treaty, (2) Principles and Objectives for Nuclear Non-Proliferation and Disarmament, and (3) Extension of the Treaty on the Non-Proliferation of Nuclear Weapons;
2. Notes also the resolution on the Middle East adopted on 11 May 1995 by the parties to the Treaty;
3. Notes further that the States party to the Treaty participating in the Conference:
 - (a) Agreed to strengthen the review process for the operation of the Treaty with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized and decided that, in accordance with article VIII, paragraph 3, the Review Conferences should continue to be held every five years, and that, accordingly, the next Review Conference should be held in the year 2000, and that the first meeting of the Preparatory Committee should be held in 1997;
 - (b) Affirmed the need to continue to move with determination towards the full realization and effective implementation of the provisions of the Treaty and accordingly adopted a set of principles and objectives;
 - (c) Decided that, as a majority existed among States party to the Treaty for its indefinite extensions, in accordance with its article X, paragraph 2, the Treaty shall continue in force indefinitely;
4. Takes note that the three decisions and the resolution were adopted without a vote.

V. Comments From Readers

The editor's attention has been drawn to a mistake in PPNN Newsbrief 31 (third quarter 1995) page 3. In the second column of that page, in an item reporting on a new agreement between the Russian Federation and the United States about the purchase of highly-enriched uranium from Russian stockpiles, the US Nuclear Energy Institute was said to have 'previously resisted the entry of Russian uranium into the American market...' In fact, the Director for Nuclear Fuel and International Commerce of the Nuclear Energy Institute points out that the Nuclear Energy Institute has consistently supported blending of both United States and of Russian uranium to a level where that is suitable for use as reactor fuel.

The Programme for Promoting Nuclear Non-Proliferation and the Newsbrief

The Newsbrief is part of the outreach effort which constitutes a major element of the Programme for Promoting Nuclear Non-Proliferation (PPNN). It is addressed to an audience interested in the subject of nuclear (non-)proliferation, to inform and help them alert their respective environments to the issue of nuclear non-proliferation.

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Please note the changes to the Southampton telephone and fax numbers and the postcode above.

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