



# Trust and Verify

The Bulletin of the Verification Technology Information Centre

No. 32 October 1992

ISSN 0966-9221

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## US Nuclear Testing law

On 2 October, President Bush signed the Energy and Water Development Appropriations Bill which contains provisions on limiting United States nuclear weapons testing, making it law.

The President had indicated his disapproval at the limitations imposed. However, the Bill contains over provisions, most notably the first element of funding for the \$8 billion Supercollider project in Texas, which the President had strongly supported. His power of veto extends to the bill its entirety, not to individual parts and so to have vetoed the testing limitations would have vetoed the other spending provisions.

The testing provisions are not clearly worded, and some dispute may arise in interpretation while they are in force. There is a drafting error as two dates are given for the termination of the testing provisions: 1 January 1997 and 30 September 1996. It seems that the latter is the correct date. This may be clarified in a future act.

The text of the law relating to nuclear testing is reproduced in this edition of *Trust & Verify*.

### Provisions

The provisions of the new law include:

- A maximum of 15 safety-related tests for the period 1 July 1993 to 30 September 1996, with a maximum of five of these tests in each of the annual report periods. Congress has the power to 'disapprove' each annual report, and therefore the testing schedule contained within it.
- A maximum of one reliability-related test in each of the annual report periods, if the President certifies within 60 days of the beginning of that period that it is required. Congress has the power to 'disapprove' such a test.
- No testing at all after 30 September 1996 unless a foreign state conducts a test after this date. If this occurred, testing could resume without restriction. (Earlier drafts had specifically mentioned Russia, but the final law refers to any foreign state.)
- The United Kingdom would be allowed one test per annual report period, to be included in the safety total.

### Annual reports

Each annual report to Congress should contain:

- A schedule for negotiations on a test ban and a plan for achieving a 'multilateral comprehensive ban on the testing of nuclear weapons on or before September 30, 1996.'

- Assessments of the warheads in the US active and inactive stockpiles.
- Descriptions of the safety features in the warheads in the active stockpile.
- Assessments on the tests required to fit modern safety features to warheads that are to remain in the active stockpile after 30 September 1996.
- A schedule of tests for the period covered by the report.
- Annual report periods:
  - 1 July 1993 to 30 September 1994
  - 1 October 1994 to 30 September 1995
  - 1 October 1995 to 30 September 1996

### Milestones

The proposals, in an earlier form, were approved by the Senate on 3 August on a 68-26 vote. On 24 September, the House of Representatives voted 224-151 in favour. On 2 October the provisions became law.

President Bush has stated in the past that, in his view, at least 6 tests per year were required to maintain the US nuclear stockpile. Presidential candidate Bill Clinton has been more favourably disposed to a test ban.

### Impact on the United Kingdom

The impact on the United Kingdom nuclear weapons programme is unclear. Ministry of Defence (MoD) statements, as reported in the press, indicate that there would be no impact on the Trident programme, as these weapons are already in production.

The replacement for the WE177 free-fall nuclear bomb, known within the MoD as the 'Future Theatre Nuclear Weapon' or FTNW may be affected. The delivery system for the FTNW is likely to be a tactical air-to-surface missile (TASM)

There had been indications that the United Kingdom had preparing a test at Nevada, scheduled for 12 October. This date falls within the moratorium period. The last British nuclear test was on 26 November 1991.

### Russia

Now that the US situation is becoming clearer, the Russian testing moratorium takes on a new significance. The one year moratorium, announced by President Gorbachev and adhered to by President Yeltsin, is due to expire on 26 October.

An adviser to President Yeltsin, Alexei Yabakov, was quoted in early September by Reuters as saying that Yeltsin 'does not have sufficient reason to extend the moratorium if other countries go on testing.'

In late September and early October there were indications, but no formal announcement, that testing would resume at the end of the year.

Russian defence minister Pavel Grachev is quoted by the *International Herald Tribune* as saying on 13 October that if testing resumes 'it will not be before



mid-1993'. He also stated that 'everything then will depend on the American side. However, other reported statements by him, through Itar-Tass, asserted that he would propose limited nuclear testing from the middle of 1993.

#### France

French sources have indicated that a decision on whether to extend the existing moratorium beyond the end of 1992 is to be taken soon.

#### China

China has carried out two nuclear tests this year, in May and September.

When China joined the NPT in March of this year, its Instrument of Accession included the following statement: 'To attain the lofty goal of complete prohibition and thorough destruction of nuclear weapons, countries with the largest nuclear arsenals should earnestly fulfil their special obligations by taking the lead in halting the testing, production and deployment of nuclear weapons and drastically reducing those weapons of all kinds they have deployed inside and outside their countries. Tangible progress they make in all these aspects will create conditions for the convening of a widely representative international conference on nuclear disarmament with the participation of all nuclear-weapon states.'

#### Legal language

Extract from the Energy and Water Development Appropriations Act, 1993 relating to nuclear testing:

- Sec. 507. (a) Hereafter, funds made available by this Act or any other Act for fiscal year 1993 or for any other fiscal year may be available for conducting a test of a nuclear explosive device only if the conduct of that test is permitted in accordance with the provisions of this section
- (b) No underground test of a nuclear weapon may be conducted by the United States after September 30, 1992 and before July 1, 1993.
- (c) On and after July 1, 1993, and before January 1, 1997, an underground test of a nuclear weapon may be conducted by the United States—
- (1) only if—
- (A) the President has submitted the annual report required under subsection (d);
- (B) 90 days have elapsed after the submittal of that report in accordance with that subsection; and
- (C) Congress has not agreed to a joint resolution described in subsection (d)(3) within that 90-day period; and
- (2) Only if the test is conducted during the period covered by the report.
- (d) (1) Not later than March 1 of each year beginning after 1992, the President shall submit to the Committees on Armed Services and Appropriations of the Senate and the House of Representatives, in classified and unclassified forms, a report containing the following matters:
- (A) A schedule for resumption of the Nuclear Testing Talks with Russia.
- (B) A plan for achieving a multilateral comprehensive ban on the testing of nuclear weapons on or before September 30, 1996.
- (C) An assessment of the number and type of nuclear warheads that will remain in the United States stockpile of active nuclear weapons on September 30, 1996.

- (D) For each fiscal year after fiscal year 1992, an assessment of the number and type of nuclear warheads that will remain in the United States stockpile of nuclear weapons and that—
- (i) will not be in the United States stockpile of active nuclear weapons;
- (ii) will remain under the control of the Department of Defense; and
- (iii) will not be transferred to the Department of Energy for dismantlement.
- (E) A description of the safety features of each warhead that is covered by an assessment referred to in subparagraph (C) or (D).
- (F) A plan for installing one or more modern safety features in each warhead identified in the assessment referred to in subparagraph (C), as determined after an analysis of the costs and benefits of installing such feature or features in the warhead, should have one or more of such features.
- (G) An assessment of the number and type of nuclear weapons tests, not to exceed 5 tests in any period covered by an annual report under this paragraph and a total of 15 tests in the 4-fiscal year period beginning with fiscal year 1993, that are necessary in order to ensure the safety of each nuclear warhead in which one or more modern safety features are installed pursuant to the plan referred to in subparagraph (F).
- (H) A schedule, in accordance with subparagraph (G), for conducting at the Nevada test site, each of the tests enumerated in the assessment pursuant to subparagraph (G).
- (2) The first annual report shall cover the period beginning on the date on which a resumption of testing of nuclear weapons is permitted under subsection (c) and ending on September 30, 1994. Each annual report thereafter shall cover the fiscal year following the fiscal year in which the report is submitted.
- (3) For the purposes of paragraph (1), "joint resolution" means only a joint resolution introduced after the date on which the committees referred to in that paragraph receive the report required by that paragraph the matter after the resolving clause of which is as follows: "The Congress disapproves the report of the President on nuclear weapons testing, dated \_\_\_\_\_." (the blank space being appropriately filled in).
- (4) No report is required under this subsection after 1996.
- (e) (1) Except as provided in paragraphs (2) and (3), during a period covered by an annual report submitted pursuant to section (d), nuclear weapons can be tested only as follows:
- (A) Only those nuclear explosive devices in which modern safety features have been installed pursuant to the plan referred to in subsection (d)(1)(F) may be tested.
- (B) Only the numbers and types of tests specified in the report pursuant to subsection (d)(1)(G) may be conducted.
- (2) (A) One test of the reliability of a nuclear weapon other than one referred to in paragraph (1)(A) may be conducted during any period covered by an annual report, but only if—
- (i) within the first 60 days after the beginning of that period, the President certifies to Congress that it is vital to the national



- security interests of the United States to test the reliability of such a weapon; and
- (ii) within the 60-day period beginning on the date that Congress receives the certification, congress does not agree to a joint resolution described in subparagraph (B).

(B) For the purposes of subparagraph (A), "joint resolution" means only a joint resolution introduced after the date on which the Congress receives the certification referred to in that subparagraph the matter after the resolving clause of which is as follows: "The Congress disapproves the testing of a nuclear weapon covered by the certification of the President dated \_\_\_\_\_." (the blank space being appropriately filled in).

- (3) The President may authorize the United Kingdom to conduct in the United States, within a period covered by an annual report, one test of a nuclear weapon if the President determines that it is in the national interests of the United States to do so. Such a test shall be considered as one of the tests within the maximum number of tests that the United States is permitted to conduct during that period under paragraph (1)(B).
- (f) No underground test of nuclear weapons may be conducted by the United States after September 30, 1996, unless a foreign state conducts a nuclear test after this date, at which time the prohibition on United States nuclear testing is lifted.
- (g) In the computation of the 90-day period referred to in subsection (c)(1) and the 60-day period referred to in subsection (e)(2)(A)(ii), the days on which either House is not in session because of an adjournment of more than three days to a day certain shall be excluded.
- (h) In this section, the term "modern safety feature" means any of the following features:
  - (1) An insensitive high explosive (IHE).
  - (2) Fire Resistant Pits (FRP).
  - (3) An enhanced detonation safety (ENDS) system.

## CWC update

The Chemical Weapons Convention continues to make progress through the United Nations. More than 100 states have now indicated that they wish to co-sponsor the resolution from the First Committee to the General Assembly, recommending adoption of the CWC.

## CFE update

Since the decision to provisionally apply the CFE Treaty from 17 July, the United Kingdom has carried out 19 baseline inspections. States inspected so far have been Azerbaijan, Belarus, Bulgaria, CSFR, Hungary, Poland, Romania, Russia and Ukraine. Many of these inspections have included guest inspectors from other NATO states.

UK inspections are carried out by the Joint Arms Control Implementation Group (JACIG), based at RAF Scampton. JACIG personnel have also been guest inspectors on 12 other baseline inspections.

In addition to the baseline inspections, the process of verifying reductions in Treaty-limited equipment by on-site inspection has started. Reduction inspection teams tend to be more multinational, although each inspection has a lead country. So far, JACIG personnel have participated in 12 reduction inspections, and the UK has been lead country in four of them.

The United Kingdom has been host to three baseline inspections carried out by the Russians.

## Open Skies test flight

A recent Open Skies exercise involving a British aircraft overflying parts of Russia has been counted as a success. This followed an earlier exercise between Poland and the Benelux states in March.

In early September, an Andover of the Royal Air Force and a Russian An-30 overflew Russia in an exercise to test procedures under the Open Skies Treaty. This included sealing of the sensors carried while overflying other states en route to Russia.

The exercise involved three flights and totalled about 10 hours flying time.

The British and Russian crews were joined by observers from each of the Western European Union states, and from Sweden and the United States.

The Open Skies treaty is expected to enter into force in the middle of 1993.

## ENMOD Review Conference

The Second Review Conference of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention) took place in Geneva on 14-18 September.

Some matters of contention were raised in the conference about the Convention's operation and scope. Many of these were produced as annexes to the Final Declaration.

## In the News

### Uranium smuggling

2.2 kg of uranium were seized by German police in Munich on 13 October. The material was initially thought to be weapons-grade, but later reports indicate that the material was only slightly enriched.

The material is thought to have originated in eastern Europe and follows earlier arrests in which quantities of caesium-137 and strontium-90 were seized.

### UK export court case

Three men connected with Matrix-Churchill, a British machine tool manufacturer, have appeared at the Old Bailey charged with breaching a ban on exporting arms-related equipment to Iraq. All three deny the charges.

The defence has stated that the Department of Trade and Industry condoned the sale to Iraq of machine tools it knew could be used to make weapon components. The trial was continuing as *Trust & Verify* went to press.

### Greenpeace ship

Following the Norwegian expedition to survey the Kara Sea for signs of abnormal radioactivity (see last issue), a Greenpeace ship, *Solo*, attempted to reach the former nuclear testing site of Novaya Zemlya to carry out its own survey.

The ship was boarded and seized on 12 October and then towed to a Russian port.

### CIS targeting

It has been acknowledged by CIS commanders that strategic nuclear missiles are still aimed at American



cities, following assurances given earlier this year that they would be retargeted.

As is often the case with other issues relating to forces of the Soviet Union, the transition to new command structures has not been easy. It appears that the retargeting is a symptom of the difficulties of establishing a new chain of command and new targeting procedures.

## Recent Publications

### Japanese plutonium shipments

As the controversy over shipments of plutonium to Japan mounts (see last issue), a detailed article by William Walker and Frans Berkhout in the September edition of *Arms Control Today* gives an overview of the Japanese nuclear programme.

The article also makes several recommendations for changes to the present situation and to prevent a build-up of surplus plutonium in the world. The most significant of these is that the new reprocessing plants, THORP in England and UP2-800 in France, should be decommissioned before any nuclear material is introduced.

### Conventional arms transfers

The Canadian Centre for Arms Control and Disarmament has produced the thirteenth in its series of *Aurora Papers* entitled 'Conventional Arms Transfers: Approaches to International Control in the 1990s' by John M. Lamb and Jennifer L. Moher.

### Office of Technology Assessment

The United States Office of Technology Assessment has produced two new reports: 'Verification Technologies: Cooperative Aerial Surveillance in International Agreements' and 'Monitoring Limits on Sea-launched Cruise Missiles'.

### Arms Control and the Environment

The External Affairs and International Trade department of the Canadian Government has prepared report entitled 'Verifying Obligations Respecting Arms Control and The Environment: A Post Gulf War Assessment'.

The report follows a workshop hosted by the Toxicology Research Centre at the University of Saskatchewan in the run-up to the ENMOD Convention Review Conference.

### Science and Peace

Schriftenreihe Wissenschaft und Frieden have produced a two-volume report based on a conference in November-December 1991 entitled 'Challenges: Science and Peace in a Rapidly Changing Environment'. This conference led to the foundation of an International Network of Engineers and Scientists for Global Responsibility (INES).

## VERTIC News

### IAEA Report

Owen Greene of Bradford University is producing a report for VERTIC on the International Atomic Energy Agency's inspection process in Iraq, which will be published in early November. Copies will be available from the VERTIC office, priced £10 (post-free).

### VERTIC/KFA Jülich report

VERTIC's environment project director, John Lanchbery is currently preparing a report on the use of remote sensing to monitor forest burning and land use for publication in January 1993.

The report is being prepared with Owen Greene and Julian Salt of Bradford University and forms part of a study by KFA Jülich, part of the German Government's Project IKARUS on forming an emissions inventory for Germany and on means of verifying a climate convention.

### Questionnaire

Thanks to all those who have already completed and returned the questionnaires that were included with the last *Trust & Verify*. Would readers who have not yet filled their's out please do so soon.

### Editor's Note

Is it only my ears that are appalled at the use of the recently manufactured word 'dismantlement', when it means the same as 'dismantling', which has been in existence for years?

*Trust & Verify* is edited and produced by Richard Guthrie with additional reporting by Philip McNab

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### Trust & Verify

*Trust & Verify* is produced by VERTIC roughly 10 times a year. Anyone wishing to contribute information for inclusion in *Trust & Verify*, or to comment on its contents, should contact the VERTIC office.

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### What is VERTIC?

VERTIC is an independent organization aiming to research and provide information on the role of verification technology and methods in present and future arms control and environmental agreements. VERTIC coordinates six working groups comprising 21 UK consultants and 11 overseas advisors. VERTIC is the major source of information on verification for scientists, policy makers and the press. VERTIC is funded primarily by grants from foundations and trusts and its independence is monitored by an Oversight and Advisory Committee.

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