

F. A. S. NEWSLETTER

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DRAFT TREATY PROHIBITING THE EMPLACEMENT OF NUCLEAR WEAPONS AND OTHER WEAPONS OF MASS DESTRUCTION ON THE SEABED AND OCEAN FLOOR

*Submitted by the United States
at the
Eighteen-Nation Disarmament Conference
in Geneva, on May 22, 1969*

The States Parties to this Treaty,

Recognizing the common interest of all mankind in the progress of the exploration and use of the seabed and ocean floor for peaceful purposes,

Considering that the prevention of a nuclear arms race on the seabed and ocean floor serves the interests of maintaining world peace, reduces international tensions, and strengthens friendly relations among States,

Convinced that this Treaty will further the principles and purposes of the Charter of the United Nations, in a manner consistent with the principles of international law and without infringing the freedoms of the high seas,

Have Agreed as Follows:

ARTICLE I

1. Each State Party to this Treaty undertakes not to implant or emplace fixed nuclear weapons or other weapons of mass destruction or associated fixed launching platforms on, within or beneath the seabed and ocean floor beyond a narrow band, as defined in Article II of this Treaty, adjacent to the coasts of any State.

2. Each State Party to the Treaty undertakes to refrain from causing, encouraging, facilitating or in any way participating in the activities prohibited by this Article.

ARTICLE II

1. For purposes of this Treaty, the outer limit of the narrow band referred to in Article I shall be measured from baselines drawn in the manner specified in paragraph 2, hereof. The width of the narrow band shall be three (3) miles.

2. Blank (Baselines).

3. Nothing in this Treaty shall be interpreted as prejudicing the position of any State Party with respect to rights or claims which such State Party may assert, or with respect to recognition or non-recognition of rights or claims asserted by any other state, relating to territorial or other contiguous seas or to the seabed and ocean floor.

ARTICLE III

1. In order to promote the objectives and ensure the observance of the provisions of this Treaty, the Parties to the Treaty shall remain free to observe activities of other States on the seabed and ocean floor, without interfering with such activities or otherwise infringing rights recognized under international law including the freedoms of the high seas. In the event that such observation does not in any particular case suffice to eliminate questions regarding fulfillment of the provisions of this treaty, parties undertake to consult and to cooperate in endeavoring to resolve the questions.

2. At the review conference provided for in Article V, consideration shall be given to whether any additional rights or procedures of verification should be established by amendment to this treaty.

ARTICLE IV

Any State Party to the Treaty may propose amendments

(Continued on Page 2, Col. 1)

F.A.S. CALLS FOR STRATEGIC WEAPONS FREEZE AND DEFERRAL OF U.S. ABM DEPLOYMENT AND MIRV TESTING

The Federation of American Scientists calls upon the Administration to put a mutual halt on the deployment of offensive and defensive strategic weapons first on the agenda of the forthcoming U.S.-Soviet missile talks. The administration should, through its own actions, give the talks a chance to succeed. The deployment of ABM by this country should be deferred while these talks get underway. Flight testing and deployment of U.S. multiple independently targetable reentry vehicles (MIRV) should be halted and agreement sought on a bilateral moratorium on MIRV testing. If MIRV were to be completed, it would be most difficult to design an agreement prohibiting the installation of MIRV on each side's missile force. And if the installation of MIRV were to be completed another spiral in weapons deployment would become inevitable.

At this time both we and the Soviet Union have acknowledged "sufficiency" in nuclear-armed missiles and each is confident of its own strength. Only a few times in the past have there been even remotely comparable possibilities for a strategic weapons freeze. As former Secretary of Defense Clark Clifford has warned, agreement may be made much more difficult in just six or twelve months by technical developments. The fears raised by the Administration of future Soviet SS-9's with MIRV and of future Soviet ABM can best be handled by negotiating bilateral prohibitions on both of these weapons systems. With the missile talks imminent this country should not move ahead with the very two weapons systems we want to prohibit.

ARMY ADMITS NERVE GAS KILLED SHEEP

The following article appeared in the New York Times on May 22, 1969.

Under Congressional prodding, the Army admitted for the first time today that its nerve gas killed 6,000 sheep in Utah more than 14 months ago.

The admission was wrung from three Army officials, a shared at a time, during half a day of hard and angry questioning by members of the House Subcommittee on Conservation and Natural Resources.

The Army men also explained how the accident had happened through the malfunction of a spraying device on an airplane.

After they had left the hearing, Dr. William M. Stewart, the Surgeon General of the Public Health Service, conceded with seeming reluctance that a threat to life, including human, still existed at the same test site, despite tightened safety measures.

Two or three members of the subcommittee went into the hearing, which began yesterday, persuaded that the Army had resorted to "a pattern of deception," as Representative Guy Vander Jagt, Republican of Michigan, said at one point.

Representative Henry S. Reuss, Democrat of Wisconsin, the subcommittee chairman, put the Army men on notice, from the moment he swore them in as witnesses that their credibility was on trial.

"Do you swear to tell the truth, the whole truth and

(Continued on page 2, col. 2)

REPORT ON RADIOACTIVE WASTES FROM NUCLEAR-POWERED SHIPS

The following article is an abridgment of a report published under the auspices of the U.S. Department of Health, Education, and Welfare.

This report summarizes data on disposal of radioactive wastes from U.S. Naval nuclear-powered ships and their support facilities and summarizes results of environmental monitoring performed to confirm the adequacy of waste disposal limits and procedures. The waste disposal data show that the total long-lived radioactivity in liquid waste discharges associated with operation and maintenance of Naval nuclear-powered ships totaled 0.39 curies in 1966 and 0.11 curies in 1967 for all harbors, which is less than the average of 4 curies reported discharged per year during the previous 5 years. Results of environmental surveys of harbor water and bottom sediment for gross radio-activity and for cobalt-60 have shown that, (1) no increase in radio-activity above normal background levels has been detected in harbor water, (2) discharges of liquid wastes from U.S. Naval nuclear-powered ships have not caused a measurable increase over the general back-ground radioactivity of the environment, and (3) low-level cobalt-60 radioactivity is detectable in localized areas of harbor bottom sediment around a few piers at operating bases and shipyards where maintenance and overhaul of Naval nuclear-powered ships have been conducted over a period of several years.

This report confirms that procedures used by the Navy to control discharges of radioactivity from U.S. Naval nuclear-powered ships and their support facilities are effective in protecting the health and safety of the general public.

Monitoring for cobalt-60 in harbor bottom sediment is conducted each quarter year by collecting 20 to 100 samples with a 6-inch square sampler. Samples are taken of the top one-half to one inch of sediment in the immediate vicinity of and away from berthing areas used by Naval nuclear-powered ships. These surveys show that the total amount of cobalt-60 observed in bottom sediment near a few piers is small compared to natural radioactivity present in harbors.

Samples from each of these harbors are also checked at least annually by a U.S. Atomic Energy Commission laboratory to ensure that analytical procedures are correct and standardized. In addition, the U.S. Navy cooperates with the U.S. Public Health Service surveys in some U.S. harbors.

(*Radiological Health Data and Reports*, April 1969, "Disposal of Radioactive Wastes from U.S. Naval Nuclear-powered Ships and Their Support Facilities, 1967," by M. E. Miles and J. J. Mangeno. Further sampling and analyzing procedures were discussed in the article, and tables presented data for named locations.)

Draft on Emplacement of Nuclear Weapons—from p. 1

to this Treaty. Amendments shall enter into force for each State Party to the Treaty accepting the amendments upon their acceptance by a majority of the States Parties to the Treaty and thereafter for each remaining State Party on the date of acceptance by it.

ARTICLE V

Five years after the entry into force of this Treaty, a conference of Parties to the Treaty shall be held in Geneva, Switzerland, in order to review the operation of this Treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty are being realized. Such review shall take into account any relevant technological developments. The review conference shall determine in accordance with the views of a majority of those Parties attending whether and when an additional review conference shall be convened.

ARTICLE VI

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 the supreme interests of its Country. It shall give notice of such withdrawal to all other

Parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

ARTICLES VII & VIII

Blank. (Administrative Provisions)

Nerve Gas Killed Sheep—Cont. from p. 1

nothing but the truth?" he asked. His eyebrows shot up, and his voice was loud and hard when he pronounced the word "nothing."

The Army witnesses were Dr. K. C. Emerson, acting Deputy Assistant Secretary of the Army for research and development; Brig. Gen. William W. Stone, director of materiel requirements for the Army Materiel Command, and Dr. Mortimer Rothenberg, scientific director of the Desert Test Center, which includes the Dugway Proving Ground in Utah where the accident occurred.

The hearing, called to explore the possible dangers of open-air testing of poison gases and biological warfare weapons, concentrated today on the Army's version of what happened to the 6,000 sheep that died mysteriously in March, 1968, in Skull Valley, Utah.

Skull Valley is near the Dugway Proving Ground, and there was suspicion from the beginning that one of the Army's toxic agents had killed the sheep.

Army Denials Recalled

The Army denied this repeatedly, however. It finally paid the ranchers for their sheep, but still made no official acknowledgement of responsibility.

Since the subcommittee members were already convinced that the Army had caused the deaths, they sent most of the hearing today examining the army's handling of the incident, particularly its public and semi-public denials of responsibility.

The Army spokesmen confirmed, after much verbal jousting, that the public information officer at Dugway had not told the truth when he told reporters last March that Dugway had done no testing that could have caused the sheep to die.

General Stone said the Army had "finally and definitely" identified the poison in the sheep as nerve gas in mid-May last year.

He explained how the gas had got to Skull Valley: A plane sprayed it on the proving ground, but a valve opened too slowly, causing the lethal substance to "dribble out" at much higher altitudes than the Army had planned on. Wind caught the gas and blew it to Skull Valley.

A committee headed by the Surgeon General investigated the incident and recommended improved safety measures last year. Dr. Stewart told the subcommittee today that, under the new rules, almost all of an agent being tested, such as nerve gas, would remain on the proving ground.

An 'Independent Panel

He said that a small amount might be expected to come to earth outside, between the proving ground and U.S. Highway 40, which is 30 miles to the north.

Mr. Reuss asked if a strong wind might pick up some of the gas from the soil and carry it on to the travelers on Highway 40. Dr. Stewart said that that was conceivable.

The Army has set up an "independent" nonmilitary committee to oversee its safety practices. Dr. Emerson submitted the list of committee members to the subcommittee.

Mr. Reuss noticed that all but one were identified by Jobs. That one, Dr. Jake T. Nolen, the chairman, was listed only as a resident of Wilmington, Del.

Mr. Reuss asked whom Dr. Nolen worked for, and Dr. Emerson said E. I. du Pont de Nemours & Co. Mr. Reuss, his face hard and angry, asked Dr. Emerson if he knew that du Pont was one of the 50 largest defense contractors and if he still thought the Army's committee was independent.

Dr. Emerson said that he thought it was.

On the other side of Capitol Hill, Senator Harrison A. Williams Jr., Democrat of New Jersey, said that he had caught the Army in a misrepresentation.

NEWS ITEMS

REPRESENTATIVE RICHARD D. RUSSELL of New York, and Dr. Victor W. Sidel, an assistant professor of medicine at the Harvard Medical School and recently a consultant to the World Health Organization, jointly called for a ban on military tests that would release poison gases into the air and disease-causing germs into the environment. They also urged an end to secrecy surrounding such tests so that they could be debated in public. The Army admitted that it tests chemical weapons in the air, but refused to comment on the testing of biological weapons. The proposed ban was discussed at a hearing of the Conservation and Natural Resources subcommittee of the House Committee on Government Operations. (*N.Y. Times*, 21 May 1969.)

DR. ARTHUR L. JENSEN, an educational psychologist who recently published a paper in the *Harvard Review* advancing the hypothesis that hereditary factors may explain the lower average made by Negroes in tests of intelligence, has been the focus of harassment by individuals and groups labeling him as racist. Dr. Jensen describes himself as a liberal and a civil rights advocate. The Students for a Democratic Society has pursued a campaign with the aim of having him dismissed from the University of California, Berkeley, faculty, and, Jensen reported, he even had difficulty getting reprints of his own article, which the *Harvard Review* did not want to distribute. (*N. Y. Times*, 19 May 1969.)

BELGIAN SCIENTIST E. J. BIGWOOD of the University of Brussels announced that researchers in France and other countries were seeking to produce protein from microorganisms that are by-products of petroleum refining. He said that experimental protein was of extremely high biological value and was 2,000 times quicker to produce than meat protein. Total animal protein production in 1958 was estimated at 20 million tons for the world, and requirements will reach 40 million tons in a few years and about 60 million tons by the end of the century. (*N.Y. Times*, 4 May 1969.)

A GROUP OF JOHNS HOPKINS UNIVERSITY SCIENTISTS charged the Atomic Energy Commission with gambling with the health of human beings now and for the future by allowing a "massive proliferation" of nuclear power plants. Five scientists called a press conference at the University's School of Hygiene and Public Health to emphasize their concern over plans of the Baltimore Gas and Electric Company to build a nuclear power plant on Chesapeake Bay. They emphasized that at present the debate over the \$300 million plant, to begin generating electricity in 1973, is basically a "philosophical discussion" because "no one really has the facts." Approval of an application to construct the plant is considered a certainty; excavation for the plant is completed and minor foundation work has begun. The scientists, Dr. Cornelius Kruse, Dr. Timothy Merz, Dr. Edward P. Radford, Dr. Carleton Ray, and Dr. Roger M. Herriott, said that the radioactive wastes which will emanate from the plant at Calvert Cliffs near Lusby are krypton 85 and tritium, both of which hold danger for human beings if absorbed in too large amounts. The krypton 85 will be discharged into the air from stacks and the tritium will be discharged into the water of Chesapeake Bay, they said. The Baltimore company has said that the amount of both waste materials freed from the plant will be infinitesimal and meaningless. The doctors vehemently oppose this view, saying that radiation is cumulative and small doses from a large number of sources can equal a large dose from one source. They pointed out that there are already 11 nuclear plants in existence or planned along the Eastern seaboard, that 15 are in operation across the country, and that more than 50 are scheduled to go into operation in the next few years. They also contested the company claim that the amount of radioactivity discharged into Chesapeake Bay will be negligible by contending that any interference with the "food chain" is disrupting and no one can say what the ultimate effects might be. If the tiniest creature in the Bay absorbs some radioactivity, they fear some effects will be

passed on to humans. Dr. Merz said flatly that if tritium gets into human beings it will lead to cancer and genetic mutations. (*Washington Post*, 15 May 1969.)

A ST. LOUIS PSYCHIATRIST, Dr. John W. Olney, has produced brain abnormalities in mice by feeding them large doses of a common food-flavoring chemical, monosodium glutamate. He undertook the studies after several groups of physicians last year described the "Chinese restaurant syndrome" wherein headaches, sweating, burning sensations and a tenseness in the face and head were experienced after eating monosodium glutamate seasoned meals. Dr. Olney said that he did not think it likely that human beings would develop the serious effects observed in the mice, but that questions might be raised about pregnant women eating monosodium glutamate. (*N.Y. Times*, 10 May 1969.)

DR. KURT HIRSCHHORN, a geneticist, told a symposium at an American Pediatrics Society meeting last week that vaccinations of synthetic viruses would soon be used to correct certain inherited defects. It is feasible, he said, to devise harmless viruses that contain the genetic machinery to produce enzymes missing in persons with inborn errors of metabolism. (*N.Y. Times*, 4 May 1969.)

THE NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS (NCRP) and the Underwriters Laboratories have produced similar standards for the X-radiation maximums acceptable on domestic television receivers. Both agree that the receiving appliance should not exceed 0.5 milliroentgens per hour at any point located 5 centimeters from the outer surface. The NCRP states that the use of television receivers in the home should not contribute to the annual genetically significant dose of the population in excess of about 5 percent of the average dose from natural background radiation.

(*Regulation, Standards, and Guides for Microwaves, Ultra-violet Radiation, and Radiation from Lasers and Television Receivers—An Annotated Bibliography*, distributed by the U.S. Department of Health, Education, and Welfare, Public Health Service, Consumer Protection and Environment Health Service, April 1969.)

SENATOR EDWARD M. KENNEDY, in a speech on the U.S. government's policy toward China, said as part of a comprehensive proposal, "we should unilaterally do away with restrictions on travel and non-strategic trade. We should do all we can to promote exchanges of people and ideas, through scientific and cultural programs and access by news media representatives." (*Congressional Record*, 24 March 1969.)

MORE THAN HALF A DOZEN members of the Federation of American Scientists were contributors to "The Power of the Pentagon", a dialogue on foreign policy and national priorities which appeared as a whole issue of *The Progressive* magazine dated June 1969, distributed in May.

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Editor: Judith Eckerson.

The FAS, founded in 1946, is a national organization of scientists and engineers concerned with the impact of science on national and world affairs.

Sources of information (given in the articles in parentheses) are for further reference. Items reprinted directly from other publications are designated as such in an introductory paragraph.

ABM BIBLIOGRAPHY

The discussion surrounding the ABM, its scientific feasibility, sensibility, financial supportability, and various public officials' accusations of deception of confusion, have become so widespread that summaries in the Newsletter are likely to be partial and to add nothing essential to what is available in national publications. Since the issue is central to the FAS' concern, however, the following bibliography is supplied for members' use. It is a slightly altered version of a bibliography distributed by the Center for War/Peace Studies.

Documents: Safeguard and Sentinel

President Nixon's announcement on Deployment of the Antiballistic Missile System, March 14, 1969. *THE NEW YORK TIMES*, March 15, 1969. Also, Department of State Publication 8449, for sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, 15¢.

Describes the Safeguard anti-ballistic missile program and how it differs from the Sentinel program.

"The Dynamics of Nuclear Strategy," Robert S. McNamara. *DEPARTMENT OF STATE BULLETIN*, October 9, 1967, pp. 443-51. Also, *THE NEW YORK TIMES*, September 19, 1967, pp. 18-19.

The previous Administration's case for the Sentinel ABM as presented by the former Secretary of Defense. Several critics have commented that one of the best rebuttals to the case for the ABM is contained within McNamara's speech.

Debate and Discussion

"Missile Debate—Pro and Con on the 'Modified' ABM." *THE NEW YORK TIMES*, March 23, 1969. Reprinted by the Council for World Development and World Disarmament, 218 East 18 St., New York, N.Y. 10003.10 for 25¢; 100 for \$2.00.

Useful one-page summary of the pros and cons of President Nixon's Safeguard ABM system.

ABM: YES OR NO? Center for the Study of Democratic Institutions, Santa Barbara, Calif., 1969. 48 pp. \$1.00. Also available as a paperbound book published by Hill and Wang, 1969. \$1.75.

The report of a conference on the pros and cons of the ABM, with Donald Brennan and Leon Johnson arguing for it and Jerome Wiesner and George McGovern against it. The four statements are followed by an edited version of the discussion among the participants. Introduction by Hubert Humphrey.

ABM AND A WORLD WITHOUT WAR, Robert Pickus. Published by the World Without War Council of Northern

California, 1730 Grove St., Berkeley, California 94709. May 1969. Pamphlet, 95¢;

A resource kit for citizen action on the ABM. Critically examines the current controversy over U.S. security strategy and offers constructive alternatives to reliance on nuclear deterrence—initiatives which the U.S. could unilaterally take to begin reversing the arms race and help establish the conditions for a stable peace. Also contains a list of citizen organization "action-options" on the ABM, and a selective bibliography.

(Continued in June issue)

POISON GAS SHIPMENT AROUSES CONTROVERSY

An army plan to ship 27,000 tons of obsolete chemical warfare agents, including poison gas, from various points in the United States to the Atlantic coast, and dump the chemicals 250 miles offshore, fell under heavy criticism in May when Rep. Richard D. McCarthy of New York revealed the plan. The surplus was to be shipped from Colorado, Maryland, Alabama and Kentucky to New Jersey, loaded on four old freighters, and sunk with the freighters at sea. Major General Wendell Coats, the Army's Chief of Public Information, said the material was about half GP nerve gas and half mustard gas. The nerve gas is in Air Force bombs, and the mustard gas in cylinders of three-eighths-inch thick steel. General Coats said the cylinders would be packed in vermiculite aboard railroad cars to absorb any spillage. He ruled out any pollution of the sea as "virtually impossible" from the dumping. The sea is 7,200 feet deep at the proposed site of the dumping. In the unlikely event of a ruptured cylinder, he said, the poison would be dangerous for only 185 hours, after which it would be absorbed by the water and rendered harmless. The army calculated that it would take water at that depth 400 years to rise to the surface. After several days of controversy, the Pentagon officials in charge said that the shipment would be reconsidered. Herman Pollack, director of International Scientific and Technological Affairs for the State Department said that the State Department had never been consulted on this poison gas disposal, or several such dumpings in the past. He expressed the opinion that the dumping might violate an international convention on the use of the seas (a 1958 agreement). The National Academy of Sciences entered the picture to check the disposal plan. Rep. McCarthy announced that he had been informed by Louis Garono, the chief engineer at the Army's Edgewood Arsenal in Maryland, that the nerve gas could be removed "relatively easily" from bombs and detoxified at the storage points, eliminating the need to ship it across the country. (*Wall Street Journal*, 8 and 14 May 1969; *New York Times*, 8 and 15 May 1969.)

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