

May 9, 1978

UNITED STATES
NUCLEAR REGULATORY COMMISSION

SECY-78-11B

INFORMATION REPORT

For: The Commission

From: James R. Shea, Director, Office of International Programs

Thru: Executive Director for Operations *JRS*

Subject: PROTOCOL OF U.S. VISIT OF U.S.S.R. LWR SAFETY DELEGATION

Purpose: To forward to the Commission copies of the visit protocol signed by NRC staff and the Soviet LWR safety delegation at the conclusion of the official U.S. discussions on April 7, 1978.

Discussion: Attached for the information of the Commission is a copy of the visit protocol signed the evening of April 7 by L. M. Voronin on the U.S.S.R. side and by J. D. Lafleur, Jr. and V. Stello, Jr. on the U.S. side. The signing took place during the reception that evening at the Lafleur residence hosted by Commissioner Gilinsky.

As noted in the protocol, the sides exchanged several basic documents, mainly of a "regulatory standards" nature. (Those received from the Soviets are now being translated.) The sides agreed that cooperation in the areas of reliability and safety of power reactors was of mutual interest. The Soviets went a step further, suggesting the scope and form for this cooperation (Appendix D). NRC is to respond to their proposal by June 30.

As previously reported, IP received the full support of the program offices (particularly that of DOR, DSS, RES, and IE) and ADM in handling this exchange visit, a factor responsible in no small measure for its satisfactory conclusion.

Coordination: ELD has no legal objection.

POOR ORIGINAL

James R. Shea
James R. Shea, Director
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Enclosure:
Protocol Memorandum

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PROTOCOL MEMORANDUM OF THE
VISIT OF THE USSR DELEGATION ON LIGHT
WATER REACTOR RELIABILITY AND SAFETY* TO
THE UNITED STATES, MARCH 26 - APRIL 9, 1978

The Fourth Meeting of the USSR Joint Committee on Cooperation in Peaceful Uses of Atomic Energy occurred in Yerevan, Armenian SSR, in December 1976. The record of that meeting, signed by A. M. Petrosyants, Chairman of the State Committee on Atomic Energy of the USSR, and Robert C. Seamans, Administrator of the Energy Research and Development Administration of the U.S., called for an early exchange of visits on the safety of light water nuclear power reactors. The first visit of this exchange occurred when a U.S. team visited the USSR February 5-18, 1978. The Protocol Memorandum of this visit was signed on February 17, 1978, by L. M. Voronin, Deputy Director of Glavatomenergo of the Ministry of Power and Electrification, the Leader of the USSR Delegation, and J. D. Lafleur, Jr., Deputy Director of the Office of International Programs and V. Stello, Jr., Director of the Division of Operating Reactors, both of the Nuclear Regulatory Commission, the co-leaders of the U.S. Delegation.

The second visit of this exchange occurred when a Delegation from the USSR visited the U.S., March 26 - April 9, 1978. The USSR and US Delegation leaders were the same as those named above for the visit to the USSR. The members of the Delegations of the USSR and of the US are listed in Appendix "A".

* As defined in the Protocol of the visit to the USSR signed February 17, 1978, "reliability and safety" is used to include the following: design philosophy and criteria; related safety research; engineering calculations; quality assurance and control aspects, and construction and operation of equipment needed to assure safety of nuclear power stations with respect to the public health and environment.

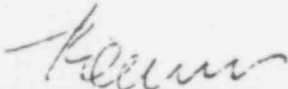
During this visit, the USSR Delegation visited the Washington, D. C. area, where they held meetings with the NRC staff, with Commissioners Gilinsky and Bradford, and with representatives of the Bechtel Corporation. The USSR delegation also visited the Idaho National Engineering Laboratory, where they received briefings on the Loss of Fluid Test, the Power Burst Facility, and the Semiscale Test programs, and conducted a short discussion on the Soviet reactor safety program. In Miami, Florida, the delegation visited the Turkey Point Nuclear Power Station of the Florida Power and Light Company. In Tampa, Florida, the delegation visited the Westinghouse Nuclear Components Fabrication Plant, and in Philadelphia, Pennsylvania the delegation visited the corporate headquarters, the Limerick Nuclear Power Station (under construction) and the Peach Bottom Power Station of the Philadelphia Gas and Electric Company.

During the visit of the Soviet Delegation to the US, the Delegations exchanged the documents listed in Appendices "B" and "C".

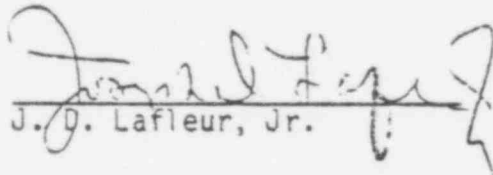
As a result of the discussions and exchange of opinions that took place during the US specialists' delegation visit to the USSR in February, 1978 and the current visit of the Soviet Delegation, both sides agreed that cooperation between them in the field of reliability and safety of nuclear power stations is of mutual interest. The Soviet side proposed that future cooperation should have the scope and form

listed in Appendix "D" of this Protocol. The US side agreed to respond to this proposal before June 30, 1978. Both sides agreed to inform the Joint Soviet-American Committee on Cooperation in the field of peaceful uses of atomic energy by presenting this Protocol, and the Protocol of February 17, 1978, to both sides of that Joint Committee.

Signed in Washington, D. C. on April 7, 1978, in two copies each, in English and Russian, both texts being equally authentic.



L. M. Voronin



J. D. Lafleur, Jr.



V. Stello, Jr.

APPENDIX "A"

DELEGATIONS OF THE
VISIT OF U.S.S.R. LIGHT WATER REACTOR SAFETY EXPERTS
TO THE U.S.

MARCH 26 - APRIL 9, 1978

Delegation of the U.S.

1. Victor Stello - Director, Division of Operating Reactors, NRC
2. Joseph D. Lafleur, Jr. - Deputy Director, Office of International Programs, NRC
3. L. S. Tong - Assistant Director for Water Reactor Safety Research, NRC
4. Boyce H. Grier - Director, NRC Inspection and Enforcement, Region I
5. Frank Schroeder - Deputy Director, Division of Reactor Systems Safety, NRC
6. Joseph Lewin - Oak Ridge National Laboratory, Nuclear Engineer, Interpreter
7. Ernst Volgenau - Director, Office of Inspection and Enforcement, NRC
8. James P. O'Reilly - Director, NRC Inspection and Enforcement, Region II

APPENDIX "A" (Continued)

Delegation of the U.S.S.R.

1. L. M. Voronin - Chief Engineer of Glavatomenergo of Ministry of Power and Electrification
2. V. V. Mar'in - Deputy Director of Soyuzatomenergostoi (All-Union Atomic Power Construction)
3. V. A. Dorokhin - Chief Engineer of the Construction Administration at Novovoronezh
4. Yu. P. Kaloshin - Chief Engineer of a department of APS design at "Teplbelectroprojekt"
5. Yu. V. Markov - Deputy Chief Engineer of the "Glavatomenergo" of the State Committee on Atomic Energy
6. G. L. Lunin - Department Head of the Kurchatov Institute
7. N. I. Ermakov - Deputy Chief Designer of the Experimental Design Organization "Gidropress"
8. V. N. Myagkov - Senior Engineer of the Education Center of the Novovoronezh APS; Interpreter

APPENDIX B

In accordance with the Protocol on the results of the visit of US specialists on nuclear power stations' reliability and safety to the USSR, February 5-18, 1978, the Soviet side submitted to the US side the following documents pertaining to Items 1-4, subsection b of the US proposal:

1. General regulations on reactor safety during design, construction, and operations.
2. The standards for the design calculation of the strength of components of reactors, steam generators, vessels and piping of nuclear power stations, and of experimental and research nuclear reactors and facilities.
3. The rules of layout and safe operation of the equipment of nuclear power stations and of experimental and research nuclear reactors and facilities.
4. Basic rules of welding and cladding of components and structures of nuclear power stations, and of experimental and research nuclear reactors and facilities (OP-1513-72).
5. Rules for inspection of welds and cladding of components and structures of nuclear power stations and experimental and research nuclear reactors and facilities (PK-1514-72).
6. Health physics regulations applicable to the design of atomic power stations.
7. Basic health physics regulations concerning handling radioactive substances and other sources of ionizing radiation (OSP-72).
8. Standards of radiation safety (NRB-69).
9. Safety regulations for transportation of radioactive substances (PBTRV-73).
10. The rules of nuclear safety of nuclear power stations (PBYa-04-74).

APPENDIX C

In accordance with the Protocol on the results of the visit of US specialists on nuclear power stations' reliability and safety to the USSR, February 5-18, 1978, the US side submitted to the Soviet side the following documents pertaining to Items 1, 2, 4, 5, and 6, subsection A of the US proposal:

1. Code of Federal Regulations:

Title 10, Energy; Parts 0 to 199 Revised January 1, 1977.

2. NRC Regulatory Guides - 10 Divisions

- | | |
|---------------------------------|------------------------|
| 1. Power Reactors | 6. Products |
| 2. Research & Test Reactors | 7. Transportation |
| 3. Fuels & Materials Facilities | 8. Occupational Health |
| 4. Environmental and Siting | 9. Antitrust Review |
| 5. Materials & Plant Protection | 10. General |

3. Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants (LWR version); Including Revisions to date. NUREG 75/087.

4. Joint Committee Print

Atomic Energy Legislation through 94th Congress, 2nd Session including:

- a) Part I, Atomic Energy Act of 1954
- b) Part II, Energy Reorganization Act of 1974
- c) Parts III through VIII, Related Legislation

APPENDIX D

USSR Proposal for

Programs of US-USSR Cooperation in the Field of Nuclear Power Stations that Use LWR's

| No. | <u>Topics of Cooperation</u> | <u>Forms of Cooperation</u> | <u>Time</u> |
|---|--|--|-----------------------------------|
| A. RELIABILITY AND SAFETY OF NUCLEAR POWER STATIONS | | | |
| 1. | Design, Concepts & Criteria | a. Exchange of standards pertaining to the required documentation | 2nd qtr 1978 |
| | | b. Exchange of info on changes in standards | Periodically |
| | | c. Concepts of safety of nuclear power sources as related to the distance from the consumers | 1979 seminar in the USSR |
| 2. | Provisions for Operational Reliability and Safety Equipment, Including Quality Control Methods | a. Seminars on inspection of equipment | 2nd qtr 1979 |
| | | b. Quality control and inspection of equipment in the US | 2nd qtr 1978 |
| | | c. Exchange of information | --- |
| | Engineering Calculations and Principles of Safety of Nuclear Power Stations | a. Exchange of technical info (codes, etc.) | 1979 |
| | | b. Joint design calculations | 1979 |
| | Research and Safety of Nuclear Power Stations | a. Joint seminars on agreed-upon topics | Annually at alternating locations |
| | | b. Exchg of research reports | --- |
| B. PERFORMANCE OF NUCLEAR POWER STATIONS IN THE UTILITIES' NETWORKS | | | |
| | Engineering Capability of dual Nuclear Power Stations that Use LWR's | a. Exchange of information | 1979 |
| | | b. Joint seminar in USSR | 1979 |