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Series: Bromley, D. Allan, Files
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Russia - Meetings [1 of 5] [1989]

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Warsaw Pact Procedures

U.S.-USSR

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY

WASHINGTON, D.C. 20506

June 28, 1989

MEMORANDUM FOR D. ALLAN BROMLEY
THROUGH: THOMAS P. RONA *TR*
FROM: JOHN F. O'NEIL *JFO*
SUBJECT: WARSAW PACT PROCEDURES--FOLLOWUP

The purpose of this memorandum is to provide information subsequent to your guidance of June 23, 1989, on the status of the procedures for review of science and S&T cooperative activities with the Warsaw Pact countries (TAB A is provided for information.)

In accordance with your guidance of June 23, I reviewed the latest edition of the procedures and forwarding memorandum. We have no substantive objection to the text of the procedures. I provided comments to State on the forwarding memorandum to the NSC, and we reached an agreement which was modified slightly in an interagency meeting held on June 23, 1989.

As currently written the memo conforms to your guidance. It:

- states that the procedures apply to bilateral cooperative science and S&T activities and agreements with Warsaw Pact countries,
- states that the procedures apply to direct and substantial multilateral cooperation with Warsaw Pact countries,
- recommends a study be conducted by year's end to determine the specific kinds of multilateral cooperation that should be reviewed,
- recommends a study of government-funded or -sponsored non/quasi-governmental cooperation to determine proper review, and
- calls for the non/quasi-governmental study to be completed by year's end.

The next step is the shepherd the procedures through the NSC.

Attachment:

TAB A: Warsaw Pact Procedures Memo
June 23, 1989

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY

WASHINGTON, D.C. 20506

June 23, 1989

MEMORANDUM FOR D. ALLAN BROMLEY

FROM: JOHN O'NEIL *JOE*
SUBJECT: WARSAW PACT PROCEDURES

The purpose of this memo is to provide information on the "Warsaw Pact Procedures" for the review of science and S&T cooperative activities with Warsaw Pact countries.

Background. Development of these procedures began approximately one year ago, but the process was formalized in December 1988 when the NSC directed that such procedures be developed and tasked State to lead the interagency effort. Interagency in this context refers to approximately 20 Departments and Agencies with interest but whose participation is voluntary.

Throughout the process OSTP has had three main concerns: sufficiency, consistency, and legality. OSTP has been supported by various other participants on each of these concerns.

Procedures are required to ensure that cooperation undertaken by the various Departments and Agencies is in accordance with Administration policy and properly accounts for national security and tech transfer concerns. Without some review, individual Departments and Agencies would undertake cooperation for parochial reasons and such cooperation might contradict Administration policy or compromise national interests, such as security and competitiveness. A method developed to consider both issues simultaneously is the interagency review process.

OSTP has sought sufficiency to ensure the procedures allow adequate examination of proposed cooperation for policy, tech transfer, competitiveness and security concerns. Views on this issue span the spectrum. Our view has tended towards more review rather than less, and OSTP has been supported consistently by OMB, USTR, DOD, Commerce, and Interior.

By consistency we have sought to ensure that government review is consistent across all forms of cooperation within government purview; that is, government bilateral, government-financed non-governmental, and multilateral government cooperation. OSTP realizes that these procedures will not rectify all problems. We have sought to ensure that the government is consistent and does

not deny, for example, bilateral cooperation for national security reasons while simultaneously permitting the same cooperation through a multilateral avenue.

OSTP has also sought, on behalf of the President, to ensure the proper participants review proposed cooperation. We believe that OSTP has a prominent, if not preeminent, role to play in policy review of cooperation by virtue of our legislation and that other Departments and Agencies also have a crucial part to play since international science has real domestic impacts. We have sought to prevent State from acting unilaterally in this area. On a tactical level we have acted to protect our role, and that of other participants, while State has sought to expand their role, particularly at our expense.

due 23 June



United States Department of State

Bureau of Oceans and International
Environmental and Scientific Affairs

Washington, D.C. 20520

UNCLASSIFIED

June 20, 1989

TO: CIA - Mr. Gordon Oehler
 COMEX - Mr. James Dearlove
 DOC - Ms. Sheri Fox
 DOD - Mr. Robert L. Mullen
 DOE - Mr. David B. Waller
 DOI - Mr. Charles Jarvis
 DOJ - Ms. Mary C. Lawton
 DOT - Dr. Voyce J. Mack
 EPA - Mr. Scott A. Hajost
 HHS - Mr. David E. Hohman
 HUD - Mr. John Geraghty
 NASA - Mr. Richard J. H. Barnes
 NRC - Mr. James Shea
 NSF - Dr. John Boright
 OMB - Mr. Daniel Taft
 OSTP - Dr. Beverly Berger
 Treasury - Mr. Edward Murphy
 USDA - Mr. Richard F. Rortvedt
 USTR - Mr. S. Bruce Wilson

*Procedures as
agreed at 28 Jun 89 meeting.*

FROM: OES/SCT - Mr. Martin Prochnik *MP*

SUBJECT: Warsaw-Pact Procedures

Attached is a draft of the Procedures for Interagency Review of Cooperative Science or Science and Technology Agreements and Activities with Warsaw-Pact countries that has been revised since the March 6 version based on further discussions with participants in the review process and on National Security Directive No. 10 of May 7, 1989.

In each instance, changes from the March 6 version are underlined for your convenience.

Also attached is a revised draft of the transmittal memorandum to the National Security Council under which the procedures will be forwarded. This memorandum has been revised based on comments received with respect to the draft of March 8.

We ask that you review the revisions in the procedures and the transmittal memorandum and send your clearance/comments in writing to Dan Reifsnnyder of this office by Friday, June 23. In view of the extensive interagency review of previous drafts of these documents, we anticipate that comments, if any, will be limited to items of major substantive concern. Mr. Reifsnnyder's telephone number is: 647-3632. The fax number is: 647-0773.

In addition, Amb. de Vos will chair a senior level meeting of the Working Group on Soviet Science and Technology (GOSSAT) on Tuesday, June 27, at 2:30 p.m. in Room 1107 of the State Department. The purpose will be to discuss implementation of the procedures. We ask that each agency limit its representatives to 'principal plus one' and notify Mr. Reifsnyder of the names of those who will attend by COB, Thursday, June 22.

Attachments:

As stated.

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01a. Memorandum	To: Brent Scowcroft From: J. Stapleton Roy Re: Procedures for Interagency Review of Science and Technology Cooperation with Warsaw-Pact Countries (2 pp.)		(b)(1)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: International Files - Country Files
WHORM Cat.:
File Location: Russia - Meetings [1 of 5] [1989]

Date Closed: 5/10/2010	OA/ID Number: 62068-001
FOIA/SYS Case #: 2005-0336-F	Appeal Case #:
Re-review Case #:	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P-1 National Security Classified Information [(a)(1) of the PRA]
- P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P-3 Release would violate a Federal statute [(a)(3) of the PRA]
- P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
- P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
- P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

- (b)(1) National security classified information [(b)(1) of the FOIA]
- (b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
- (b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
- (b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
- (b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
- (b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
- (b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
- (b)(9) Release would disclose geological or geophysical information

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01b. Procedures	Procedures for Interagency Review of Cooperative Science or Science and Technology Agreements and Activities with Warsaw-Pact Countries (15 pp.)		(b)(1)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: International Files - Country Files
WHORM Cat.:
File Location: Russia - Meetings [1 of 5] [1989]

Date Closed: 5/10/2010	OA/ID Number: 62068-001
FOIA/SYS Case #: 2005-0336-F	Appeal Case #:
Re-review Case #:	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P-1 National Security Classified Information [(a)(1) of the PRA]
- P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P-3 Release would violate a Federal statute [(a)(3) of the PRA]
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- (b)(9) Release would disclose geological or geophysical information

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01c. Report	Current or Proposed Science or Science and Technology Agreements with Warsaw-Pact Countries (7 pp.)	6/89	(b)(1)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: International Files - Country Files
WHORM Cat.:
File Location: Russia - Meetings [1 of 5] [1989]

Date Closed: 5/10/2010	OA/ID Number: 62068-001
FOIA/SYS Case #: 2005-0336-F	Appeal Case #:
Re-review Case #:	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P-1 National Security Classified Information [(a)(1) of the PRA]
- P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P-3 Release would violate a Federal statute [(a)(3) of the PRA]
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ANNEX II

MEMBERS OF GOSSAT and GEESAT
June 1989

- 1) Central Intelligence Agency
- 2) Department of Agriculture
- 3) Department of Commerce
- 4) Department of Defense
- 5) Department of Energy
- 6) Department of Health and Human Services
- 7) Department of Housing and Urban Development
- 8) Department of the Interior
- 9) Department of Justice
- 10) Department of State
- 11) Department of Transportation
- 12) Department of the Treasury
- 13) Environmental Protection Agency
- 14) National Aeronautics and Space Administration
- 15) Nuclear Regulatory Commission
- 16) National Science Foundation
- 17) Office of Management and Budget
- 18) Office of Science and Technology Policy
- 19) Office of the U.S. Trade Representative
- 20) Subcommittee on Exchanges
Technology Transfer Intelligence Committee
- 21) Other U.S. Government Agencies, as appropriate

ANNEX III

Legislation and Executive Orders Relating to Authority of Federal Agencies with respect to International Cooperation in Science and Technology

1. Department of State

The Secretary of State has statutory authority for the day-to-day management of foreign affairs (22 U.S.C. 2656). The Case-Zablocki Act requires that the Secretary of State be consulted before any international agreement is signed or concluded on behalf of the United States (1 U.S.C. 112b, as amended). In addition, the Secretary of State has primary responsibility for coordination and oversight with respect to all major science or science and technology (S&T) agreements and activities between the United States and foreign countries, international organizations, or commissions of which the United States and one or more foreign countries are members (see 22 U.S.C. 265d, as amended).

2. Office of Science and Technology Policy

The Office of Science and Technology Policy has responsibilities defined under two pieces of legislation, Title II of Public Law 94-282 and Title V of Public Law 95-426. The former is specific to OSTP, while the latter describes the role of the President in conjunction with OSTP and the Department of State.

The Director of OSTP has the legislated responsibility (see Title II of PL 94-282) to "advise the President of scientific and technological considerations involved in areas of national concern including, but not limited to, the economy, national security, health, foreign relations, the environment, and the technological recovery and use of resources (Section 204(b) (1)); assist the President in providing general leadership and coordination of the research and development programs of the Federal Government (Section 204(b) (4)); seek to define coherent approaches for applying science and technology to critical emerging national and international problems and for promoting coordination of the scientific and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems (Section 205(A) (1)); and assess and advise on policies for international cooperation in science and technology which will advance the national and international objectives of the United States (Section 205(A) (9)).

OSTP also has responsibilities under Title V of PL 95-426, Section 503. (a), as follows. "The President, in consultation with the Director of the Office of Science and Technology Policy and other officials whom the President considers appropriate, shall--

- (1) notwithstanding any other provision of law, insure that the Secretary of State is informed and consulted before any agency of the United States Government takes any major action, primarily involving science or technology, with respect to any foreign government or international organization;
- (2) identify and evaluate elements of major domestic science and technology programs and activities of the United States Government with significant international implications;
- (3) identify and evaluate international scientific or technological developments with significant implications for domestic programs and activities of the United States Government; and
- (4) assess and initiate appropriate international scientific and technological activities which are based upon domestic scientific and technological activities of the United States Government and which are beneficial to the United States and foreign countries."

3. Department of Defense

The Secretary of Defense derives his authority to protect strategic technology from his statutory responsibilities, as outlined in the National Security Act of 1947, section 202.

In addition, specific statutory responsibilities of the Secretary of Defense are contained in the 13 references listed by State (OES/SCT, Reifsnyder compilation of 3/7/89).

4. Department of the Interior

The authorities under which the Department of the Interior undertakes international cooperation are a mix of specific legal authorities granted to some of the Department's technical agencies, treaties/conventions, and laws applicable to all federal technical agencies, such as the National Environmental Policy Act of 1972. Some of these authorities are:

U.S. Geological Survey

43 U.S.C. 31(b) (P.L. 87-626 "Organic Act.")

43 U.S.C. 7701 (P.L. 95-124 "Earthquake Hazards Reduction Act of 1977.")

Bureau of Mines

30 U.S.C. 1,3,5-7, as amended; (36 Stat. 394 "Organic Act of 1910.")

49 Stat. 205 1935.

Fish and Wildlife Service

54 Stat. 1232 (Reorganization Plan III - 1940).

70 Stat. 1119 (1956).

88 Stat. 92 (1974).

16 U.S.C. 1531 et seq. ("Endangered Species Act 1973.")

Migratory Treaty Act 1918.

U.S.-Mexican Convention for Protection of Migratory Birds 1918.

5. Department of Agriculture

7 U.S.C. 3291(a).

6. Department of Commerce

Omnibus Trade and Competitiveness Act of 1988, Section 5171 which amends 22 U.S.C. 2656d (a).

National Institute of Standards and Technology (NIST) Organic Authorization Act, as amended, 15 U.S.C. 273 and 278 (g).

NOAA Authority:

15 U.S.C. Section 2901 et seq. National Climate Program

The Secretary of Commerce shall establish a National Climate Program Office to conduct a program consisting of assessments of the effects of climate on the natural environment, agricultural production, energy supply and demand, land and water resources, transportation, human health and national security. The program shall also consist of basic and applied research of climate processes and the social economic and political implications of climate change, methods of improving climatic forecasts; global data collection and dissemination of climatic information; measures to increase international cooperation in the area; mechanisms for inter-governmental studies and participate with universities and others; etc.

16 U.S.C. Section 1801 et seq. Fishery Conservation and Management Act of 1976

Authorizes the negotiation of International Fisheries Agreements with foreign nations for the purpose of ensuring the maximum sustainable fishery yield from within the U.S. Fishery Conservation Zone.

49 U.S.C. Section 1463 Weather Service Act

Secretary of Commerce shall make meteorological measurements and reports, furnish weather reports to the Secretary of Transportation and other persons engaged in civil aeronautics, establish and coordinate international exchange of weather information, participate in an international meteorological reporting network including establishing reporting stations on the high seas, in polar regions and in foreign countries, and promote and develop meteorological science.

33 U.S.C. 1121 et seq. National Sea Grant Program

Authorizes the Secretary of Commerce to enter into grants and contracts to enhance the research and development capability of developing foreign nations regarding ocean and coastal resources and to promote the international exchange of information and data with respect to assessment, development, utilization and conservation of such resources.

33 U.S.C. Section 883 Coast and Geodetic Survey Act

Authorizes Secretary of Commerce to conduct hydrographic and topographic surveys; tide and current observations; geodetic control surveys; field surveys for aeronautical charts; and geomagnetic, seismological, gravity and other geophysical measurements; to disseminate data gathered by publication of charts and tables. Authorizes Secretary to conduct work for improvement of surveying and cartographic methods, instrument and equipment and to conduct such activities with qualified organizations.

Department of Commerce Organization Order 25-5A

Delegates Authority from Secretary of Commerce to the Administrator of NOAA

NOAA Directives Manual Chapter 5

Delegates authority vested in NOAA Administrator to Assistant Administrators

7. Department of Transportation

49 U.S.C. 301 provides that "the Secretary of Transportation shall--

"(3) promote and undertake the development, collection and dissemination of technological, statistical, economic, and other information relevant to domestic and international transportation; and

"(5) promote and undertake research and development related to transportation, including noise abatement, with particular attention to aircraft noise...."

8. Department of Energy

The Department of Energy derives its general authority to cooperate internationally from sections 103(10) and 107(a) of the Energy Reorganization Act of 1974, as amended, (42 U.S.C. 5813(10) and 5817(a)), which provide respectively that DOE may encourage and participate in international cooperation in energy and related environmental research and development, and that DOE may make arrangements for the conduct of research and development activities with private or public institutions, including participation in joint or cooperative projects of a research, developmental, or experimental nature. In the area of atomic energy, DOE is authorized to conduct research and development activities through contracts, agreements and loans with private or public institutions or persons, including foreign governments. Section 31 of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2051.

Section 161 of the Atomic Energy Act of 1954, as amended provides specific authority to acquire and dispose of personal property, such as the equipment that may be exchanged under the subject Agreement.

The Department of Energy Organization Act, section 102(10), also authorizes DOE to undertake international energy activities, in coordination with the Secretary of State. 42 U.S.C. 7112(10).

9. Office of the U.S. Trade Representative

Section 5171 of the Omnibus Trade and Competitiveness Act of 1988 amended sections of the Foreign Relations Authorization Act, Fiscal Year 1979 (22 U.S.C. 2656b) to set forth responsibilities for USTR and other agencies to review all major science and technology agreements to (inter alia) ensure consistency with United States Trade Policies and relevant executive orders.

"PART II -- SYMMETRICAL ACCESS TO TECHNOLOGICAL RESEARCH

"SEC. 5171. SYMMETRICAL ACCESS TO TECHNOLOGICAL RESEARCH.

"(a) Section 502 of the Foreign Relations Authorization Act, Fiscal Year 1979 (22 U.S.C. 2656b) is amended by adding at the end the following new paragraph:

'(5) Federally supported international science and technology agreements should be negotiated to ensure that--

'(A) intellectual property rights are properly protected, and

'(B) access to research and development opportunities and facilities, and the flow of scientific and technological information, are, to the maximum extent practicable, equitable and reciprocal.'

"(b) Section 503(b) of the Foreign Relations Authorization Act, Fiscal Year 1979 (22 U.S.C. 2656c(b) is amended--

(1) by striking 'Congress' and inserting in lieu thereof 'the Speaker of the House of Representatives and the Committees on Foreign Relations and Governmental Affairs of the Senate';

(2) by inserting 'information and' before 'recommendations';

(3) by striking 'and' at the end of paragraph (1);

(4) by striking the period at the end of paragraph (2) and inserting in lieu thereof '; and'; and

(5) by adding at the end the following new paragraph:

'(3) equity of access by United States public and private entities to public (and publicly supported private) research and development opportunities and facilities in each country which is a major trading partner of the United States.'

"(c) Section 503 of the Foreign Relations Authorization Act, Fiscal Year 1979 (22 U.S.C. 2656c) is amended by adding at the end the following new subsection:

'(d)(1) The information and recommendations developed under subsection (b)(3) shall be made available to the United States Trade Representative for use in his consultations with Federal agencies pursuant to Executive orders pertaining to the transfer of science and technology.'

'(2) In providing such information and recommendations, the President shall utilize information developed by any Federal departments, agencies, or interagency committees as he may consider necessary.'

"(d) Section 504(a) of the Foreign Relations Authorization Act, Fiscal Year 1979 (22 U.S.C. 2656d(a)) is amended to read as follows:

'(a)(1) In order to implement the policies set forth in section 502 of this title, the Secretary of State (hereafter in this section referred to as the 'Secretary') shall have primary responsibility for coordination and oversight with respect to all major science or science and technology agreements and activities between the United States and foreign countries, international organizations, or commissions of which the United States and one or more foreign countries are members.

'(2) In coordinating and overseeing such agreements and activities, the Secretary shall consider (A) scientific merit; (B) equity of access as described in section 503(b); (C) possible commercial and trade linkages with the United States which may flow from the agreement or activity; (D) national security concerns; and (E) any other factors deemed appropriate.

'(3) Prior to entering into negotiations on such an agreement or activity, the Secretary shall provide Federal agencies which have primary responsibility for, or substantial interest in, the subject matter of the agreement or activity, including those agencies responsible for--

'(A) Federal technology management policies set forth by Public Law 96-517 and the Stevenson-Wydler Technology Innovation Act of 1980;

'(B) national security policies;

'(C) United States trade policies; and

'(D) relevant Executive orders,

with an opportunity to review the proposed agreement or activity to ensure its consistency with such policies and Executive orders, and to ensure effective interagency coordination.'"

Executive Order 12591 of April 10, 1987 requires federal agencies to consult with USTR concerning certain trade related issues prior to entering into science and technology agreements.

"Executive Order 12591 of April 10, 1987

"Facilitating Access to Science and Technology

"52 F.R. 13414

"By the authority vested in me as President by the Constitution and laws of the United States of America, including the Federal Technology Transfer Act of 1986 (Public Law 99-502), the Trademark Clarification Act of 1984 (Public Law 98-620), and the University and Small Business Patent Procedure Act of 1980 (Public Law 96-517), and in order to ensure that Federal agencies and laboratories assist universities and the private sector in broadening our technology base by moving new knowledge from the research laboratory into the development of new products and processes, it is hereby ordered as follows:

"Section 1. Transfer of Federally Funded Technology.

"(a) The head of each Executive department and agency, to the extent permitted by law, shall encourage and facilitate collaboration among Federal laboratories, State and local governments, universities, and the private sector, particularly small business, in order to assist in the transfer of technology to the marketplace.

"(b) The head of each Executive department and agency shall, within overall funding allocations and to the extent permitted by law:

"(1) delegate authority to its government-owned, government-operated Federal laboratories:

"(A) to enter into cooperative research and development agreements with other Federal laboratories, State and local governments, universities, and the private sector; and

"(B) to license, assign, or waive rights to intellectual property developed by the laboratory either under such cooperative research or development agreements and from within individual laboratories.

"(2) identify and encourage persons to act as conduits between and among Federal laboratories, universities, and the private sector for the transfer of technology developed from federally funded research and development efforts;

"(3) ensure that State and local governments, universities, and the private sector are provided with information on the technology, expertise, and facilities available in Federal laboratories;

"(4) promote the commercialization, in accord with my Memorandum to the Heads of Executive Departments and Agencies of February 18, 1983, of patentable results of federally funded research by granting to all contractors, regardless of size, the title to patents made in whole or in part with Federal funds, in exchange for royalty-free use by or on behalf of the government;

"(5) implement, as expeditiously as practicable, royalty-sharing programs with inventors who were employees of the agency at the time their inventions were made, and cash award programs; and

"(6) cooperate under policy guidance provided by the Office of Federal Procurement Policy, with heads of other affected departments and agencies in the development of a uniform policy permitting Federal contractors to retain rights to software, engineering drawings, and other technical data generated by Federal grants and contracts, in exchange for royalty-free use by or on behalf of the government.

"Sec. 2 Establishment of Technology Share Program. The Secretaries of Agriculture, Commerce, Energy, Health and Human Services and the Administrator of the National Aeronautics and Space Administration shall select one or more of the Federal laboratories to participate in the Technology Share Program. Consistent with its mission and policies and within its overall funding allocation in any year, each Federal laboratory so selected shall:

"(a) Identify areas of research and technology of potential importance to long-term national economic competitiveness and in which the laboratory possesses special competence and/or unique facilities;

"(b) Establish a mechanism through which the laboratory performs research in areas identified in Section 2(a) as a participant of a consortium composed of United States industries and universities. All consortia so established shall have, at a minimum, three individual companies that conduct the majority of their business in the United States; and

"(c) Limit its participation in any consortium so established to the use of laboratory personnel and facilities. However, each laboratory may also provide financial support generally not to exceed 25 percent of the total budget for the activities of the consortium. Such financial support by any laboratory in all such consortia shall be limited to a maximum of \$5 million per annum.

"Sec. 3. Technology Exchange -- Scientists and Engineers. The Executive Director of the President's Commission on Executive Exchange shall assist Federal agencies, where appropriate, by developing and implementing an exchange program whereby scientists and engineers in the private sector may take temporary assignments in Federal laboratories, and scientists and engineers in Federal laboratories may take temporary assignments in the private sector.

"Sec. 4. International Science and Technology. In order to ensure that the United States benefits from and fully exploits scientific research and technology developed abroad,

"(a) The head of each Executive department and agency, when negotiating or entering into cooperative research and development agreements and licensing arrangements with foreign persons or industrial organizations (where these entities are directly or indirectly controlled by a foreign company or government) shall, in consultation with the United States Trade Representative, give appropriate consideration:

"(1) to whether such foreign companies or governments permit and encourage United States agencies, organizations, or persons to enter into cooperative research and development agreements and licensing arrangements on a comparable basis;

"(2) to whether those foreign governments have policies to protect the United States intellectual property rights; and

"(3) where cooperative research will involve data, technologies, or products subject to national security export controls under the laws of the United States, to whether those foreign governments have adopted adequate measures to prevent the transfer of strategic technology to destinations prohibited under such national security export controls, either through participation in the Coordinating Committee for Multilateral Export Controls (COCOM) or through other international agreements to which the United States and such foreign governments are signatories.

"(b) The Secretary of State shall develop a recruitment policy that encourages scientists and engineers from other Federal agencies, academic institutions, and industry to apply for assignments in embassies in the United States; and

"(c) The Secretaries of State and Commerce and the Director of the National Science Foundation shall develop a central mechanism for the prompt and efficient dissemination of science and technology information developed abroad to users in Federal laboratories, academic institutions, and the private sector on a fee-for-service basis.

"Sec. 5. Technology Transfer from the Department of Defense. Within 6 months of the date of this Order, the Secretary of Defense shall identify a list of funded technologies that would be potentially useful to United States industries and universities. The Secretary shall then accelerate efforts to make these technologies more readily available to United States industries and universities.

"Sec. 6. Basic Science and Technology Centers. The head of each Executive department and agency shall examine the potential for including the establishment of university research centers in engineering, science, or technology in the strategy and planning for any future research and development programs. Such university centers shall be jointly funded by the Federal Government, the private sector, and, where appropriate, the States and shall focus on areas of fundamental research and technology that are both scientifically promising and have the potential to contribute to the Nation's long-term economic competitiveness.

"Sec. 7. Reporting Requirements. (a) Within 1 year from the date of this Order, the Director of the Office of Science and Technology Policy shall convene an interagency task force comprised of the heads of representative agencies and the directors of representative Federal laboratories, or their designees, in order to identify and disseminate creative approaches to technology transfer from Federal laboratories. The task force will report to the President on the progress of and problems with technology transfer from Federal laboratories.

"(b) Specifically, the report shall include:

"(1) a listing of current technology transfer programs and an assessment of the effectiveness of these programs;

"(2) identification of new or creative approaches to technology transfer that might serve as model programs for Federal laboratories;

"(3) criteria to assess the effectiveness and impact on the Nation's economy of planned or future technology transfer efforts; and

"(4) a compilation and assessment of the Technology Share Program established in Section 2 and, where appropriate, related cooperative research and development venture programs.

"Sec. 8. Relation to Existing Law. Nothing in this Order shall affect the continued applicability of any existing laws or regulations relating to the transfer of United States technology to other nations. The head of any Executive department or agency may exclude from consideration, under this Order, any technology that would be, if transferred, detrimental to the interests of national security."

10. Nuclear Regulatory Commission

The Nuclear Regulatory Commission has responsibility under the Atomic Energy Act for licensing, subject to Executive Branch review, the export of nuclear facilities; source, byproduct and special nuclear materials; and component parts of facilities and other items or substances which are especially relevant from the standpoint of export control because of their significance for nuclear explosive purposes (such as heavy water and nuclear-grade graphite (Sections 103, 104, 53, 54, 57, 62, 69, 81, 82, 109). It has responsibility under that Act for licensing the import of nuclear facilities and source, byproduct and special nuclear materials (Sections 103, 104, 53, 57, 63, 69, 81). NRC also has authority to enter into agreements with other countries for joint cooperative research and safety information exchange (Sections 31, 123). No distinction is made in the Act in the NRC's authority described above between Warsaw Pact countries and other countries.

11. National Aeronautics and Space Administration

NASA's international cooperative activities are undertaken in accordance with the following sections of the National Aeronautics and Space Act of 1958, as amended:

"Sec. 102

"(c) The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:

"(5) The preservation of the role of the United States as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere;

"(7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this Act and in the peaceful application of the results thereof...."

"Sec. 205 [NASA], under the foreign policy guidance of the President, may engage in a program of international cooperation in work done pursuant to this Act, and in the peaceful application of the results thereof...."

12. Environmental Protection Agency

1. FIFRA: a. Section 17, 7 U.S.C. 136o: imports and exports; cooperation in international research and regulations efforts.

b. Section 20, 7 U.S.C. 136r: research to carry out the purposes of FIFRA.

2. TSCA: a. Section 9 and 10, 15 U.S.C. 2608 and 2609: research and development as necessary to carry out the purposes of TSCA and to coordinate with actions taken under other federal laws administered by EPA.

b. Section 12, 42 U.S.C. 2611: exports of chemical substances.

3. NEPA: a. Section 102, 42 U.S.C. 4332: international cooperation.

b. E.O. 12114: Section 2-2: information exchange.

c. P.L. 96-229: Section 5 of the Environmental Research and Authorization Act of 1980, 42 U.S.C. 4370: use of EPA facilities by outside groups.

4. CWA: a. Section 101, 33 U.S.C. 1251: action to reduce water pollution in foreign and international waters.

b. Section 104, 33 U.S.C. 1254: research and development to reduce water pollution.

c. Section 310, 42 U.S.C. 1300, international pollution abatement.

5. RCRA: a. Section 3017, 42 U.S.C. 6938: export of hazardous wastes.

6. CAA: a. Section 103, 42 U.S.C. 7403: research and development.

b. Section 115, 42 U.S.C. 7415: international air pollution.

c. Section 153, 42 U.S.C. 7453:
cooperation and assistance with other
nations in ozone protection research.

d. Section 156, 42 U.S.C. 7456:
cooperative research.

7. CERCLA: a. Section 311, 42 U.S.C. 9660: hazardous
substance research.

8. MPRSA: a. Section 101 and 102, 42 U.S.C.
1411-12: prohibitions on ocean dumping; dumping permit
program.

b. Section 109, 42 U.S.C. 1419:
international cooperation.

9. P.L. 100-204 Global Climate Protection Act

- a. Section 1102: international cooperation
- b. Section 1103: mandate for coordinated action
- c. Section 1105: international year of global
climate protection
- d. Section 1106: climate protection and US/USSR
relations.

13. National Science Foundation 1/

"Functions of the Foundation (42 U.S.C. 1862)

"Sec. 3.(a) The Foundation is authorized and
directed...to foster the interchange of scientific and
engineering information among scientists and engineers in
the United States and foreign countries....

"Sec. 3.(b) The Foundation is authorized to
initiate and support specific scientific and engineering
activities in connection with matters relating to
international cooperation, national security, and the
effects of scientific and engineering applications upon
society by making contracts or other arrangements
(including grants, loans, and other forms of assistance)
for the conduct of such activities.

"General Authority of the Foundation (42 U.S.C. 1870)

"Sec. 11. The Foundation shall have the authority, within the limits of available appropriations, to do all things necessary to carry out the provisions of this Act, including, but without being limited thereto, the authority...

"(c) to enter into contracts or other arrangements, or modifications thereof, for the carrying on, by organizations or individuals in the United States and foreign countries, including other government agencies of the United States and of foreign countries, of such scientific or engineering activities as the Foundation deems necessary to carry out the purposes of this Act, and, at the request of the Secretary of State or the Secretary of Defense, specific scientific or engineering activities in connection with matters relating to international cooperation or national security, and, when deemed appropriate by the Foundation, such contracts or other arrangements or modifications thereof, may be entered into without legal consideration, without performance or other bonds...."

"International Cooperation and Coordination with Foreign Policy (42 U.S.C. 1872)

"Sec. 13.(a) The Foundation is hereby authorized to cooperate in any international scientific or engineering activities consistent with the purposes of this Act and to expend for such international scientific or engineering activities such sums within the limit of appropriated funds as the Foundation may deem desirable....

"(b)(1) The authority to enter into contracts or other arrangements with organizations or individuals in foreign countries and with agencies of foreign countries, as provided in section 11(c), and the authority to cooperate in international scientific or engineering activities as provided in subsection (a) of this section, shall be exercised only with the approval of the Secretary of State, to the end that such authority shall be exercised in such manner as is consistent with the foreign policy objectives of the United States."

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY

WASHINGTON, D.C. 20506

July 10, 1989

MEMORANDUM FOR D. ALLAN BROMLEY

THROUGH: THOMAS P. RONA *TR*
FROM: JOHN F. O'NEIL *JO*
SUBJECT: U.S.-USSR AGREEMENT ON COOPERATION IN THE FIELD OF
BASIC SCIENTIFIC RESEARCH

Purpose. To provide information on the subject agreement
(TAB A). OSTP is Executive Agent.

Information. The agreement consists of a framework and two
implementing Memoranda of Understanding (MOUs). The framework
was signed on January 8, 1989, by Secretary Shultz and Foreign
Minister Shevardnadze after final negotiations in Moscow during
November/December 1988. The MOUs were negotiated in Washington
during January 1989 and signed May 6. They are between:

National Science Foundation (NSF) - Soviet Academy of Sciences
(TAB B)

U.S. Geological Survey (USGS) - Soviet Ministry of Geology (TAB
C)

Fred Bernthal headed both U.S. delegations--a deputy had done
poorly at previous sessions. Dr. Yezhkov, Deputy Chairman of the
State Committee Of Science and Technology (GKNT), headed both
Soviet delegations. I represented OSTP at both sessions.

Background. The agreement covers basic science. The Soviets
repeatedly tried to expand it to include applied research. OSTP
insisted upon inclusion of a definition prescribing what is
included in basic research under this agreement and what is
excluded in applied research. The negotiated definition is at
TAB D.

The framework established eight broad areas of cooperation
(TAB E). The NSF MOU lists 45 more specific topics (TAB F). The
USGS MOU lists 16 topics (TAB G). USGS is an agency of the
Department of Interior.

The framework also established a Joint Commission (TAB H) to:
review, coordinate, and facilitate cooperation; and, consider and
recommend changes to the areas of cooperation. The Joint
Commission would ordinarily meet once a year alternately in the

U.S. and USSR. The agreement calls for Executive Agents, OSTP and GKNT, to assist the Joint Commission by designating Co-Chairpersons. State could be the Executive Secretary for OSTP, if desired.

As Executive Agent, OSTP will be expected to head the U.S. delegation to the Joint Commission meetings. Meetings have alternated between Moscow and Washington. The first Joint Commission meeting probably will take place after October 1989. Travel to Moscow will impact upon the OSTP budget.

Attachments:

TAB A: Basic Scientific Agreement
TAB B: NSF MOU
TAB C: USGS MOU
TAB D: Negotiated Definition
TAB E: Broad Areas of Cooperation
TAB F: Specific NSF MOU Topics
TAB G: USGS MOU Topics
TAB H: Establishment of Joint Commission

cc: Tom Ratchford
Bob Post

AGREEMENT BETWEEN
THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND
THE GOVERNMENT OF THE UNION OF SOVIET SOCIALIST REPUBLICS
ON COOPERATION IN THE FIELD OF BASIC SCIENTIFIC RESEARCH

The Government of the United States of America and the
Government of the Union of Soviet Socialist Republics
(hereinafter referred to as "the Parties");

Considering basic scientific research as important for
development of national economies;

Realizing that international cooperation in the field of
basic scientific research will strengthen the bonds of
friendship and understanding between their peoples and will
advance the state of science to the benefit of both countries,
as well as of all mankind;

Recalling the fruitful cooperation which has occurred
between the two countries in the past;

Referring to the relevant principles, provisions and
objectives set forth in the Final Act of the Conference on
Security and Cooperation in Europe;

Convinced of further need for developing mutually
advantageous scientific cooperation;

Noting the General Agreement Between the Government of the
United States of America and the Government of the Union of
Soviet Socialist Republics on Contacts, Exchanges and
Cooperation in Scientific, Technical, Educational, Cultural and
Other Fields, signed on November 21, 1985;

Wishing to establish closer and more regular cooperation
between scientific organizations and individual scientists;

Have agreed as follows:

ARTICLE I

The Parties shall coordinate, facilitate, and support the development and implementation of cooperation in the field of basic scientific research on the basis of the principles of equality, overall reciprocity, and mutual benefit.

ARTICLE II

Taking into account that fundamental and applied research involve a continuum of scientific activity, for the purposes of this Agreement, "basic scientific research" means theoretical or experimental research having as its objective the acquisition of fuller knowledge or understanding of the elemental principles of phenomena and observable facts; such research extends the knowledge base from which many societal benefits ultimately flow, and, in the framework of this Agreement, such research is not designed for the transformation of new discoveries into applied technologies. The foregoing definition does not preclude subsequent application of knowledge or understanding gained from basic scientific research conducted under this Agreement, subject to the extent of rights under Annex II.

ARTICLE III

Cooperation under this Agreement may be implemented in the following forms:

- Joint scientific research projects including the exchange of scientists, specialists, and researchers participating in them as well as exchange of their results;

- Joint scientific conferences, symposia, and workshops;
- Exchange of scientific information and documentation;
and
- Other forms of cooperation which may be mutually
agreed.

ARTICLE IV

Scientific organizations of the two Parties will conclude subsidiary Memoranda of Understanding (hereinafter referred to as "MOUs") in order to carry out the operational implementation of this Agreement. Consideration of MOUs shall be initiated upon agreement of the Parties, acting through their Executive Agents identified in Annex I, which is an integral part of this Agreement.

ARTICLE V

Cooperative activities in the field of basic scientific research under this Agreement will be subject to official approval in each country, and implemented, in accordance with their respective international obligations, national laws, regulations and procedures. Such cooperation will be governed by the applicable MOUs. Within this framework:

- such cooperation may include the participation of scientific institutions, government and nongovernment agencies, higher educational institutions, and individual scientists, specialists and researchers (hereinafter referred to as "partners");
- partners may carry out such cooperation in approved areas through direct contacts and arrangements.

In order to facilitate implementation of this Agreement, partners of one country intending to visit partners of the other country for purposes of developing or implementing cooperation under this Agreement are to so indicate in applying for permission to enter.

ARTICLE VI

Cooperation under this Agreement shall be conducted within the limits of available funds. Financial arrangements for cooperation will be set forth in the MOUs.

ARTICLE VII

With respect to cooperation under this Agreement, each Party, in accordance with its international obligations, national laws and regulations, shall:

(a) encourage the participation of qualified scientists, specialists, and researchers in activities under this Agreement, whether or not they are affiliated with institutions participating in cooperation;

(b) facilitate prompt and efficient entry into and exit from its territory of persons participating in the implementation of this Agreement, as well as of appropriate instrumentation and equipment; and

(c) facilitate prompt and efficient access of persons of the other Party participating in the implementation of this Agreement to its relevant geographic areas, institutions, data, materials, and individual scientists, specialists, and researchers.

ARTICLE VIII

Protection of intellectual property and rights thereto shall be as set forth in Annex II, which constitutes an integral part of this Agreement.

ARTICLE IX

Scientific and technological information derived from cooperative activities under this Agreement, other than information not disclosed for commercial or industrial reasons, shall be made available, unless otherwise agreed in writing as provided for in Articles IV and V, to the world scientific community. This will be accomplished through customary channels and in accordance with Article VIII and Annex II of this Agreement, and the normal practices and regulations of the Parties.

ARTICLE X

The Parties agree to establish a US-USSR Joint Commission on Cooperation in the Field of Basic Scientific Research (hereinafter referred to as the "Joint Commission"). The composition of the Joint Commission and the principles for its operation are specified in Annex I.

ARTICLE XI

Initial areas of cooperation are listed in Annex III, which constitutes an integral part of this Agreement. Additions, deletions, or modifications to the list of areas may be

considered by the Joint Commission, as provided in Annex I, paragraph 7, and must be approved by the Parties, as provided in paragraph 4 of Article XIV.

ARTICLE XII

This Agreement and the MOUs shall be without prejudice to other agreements concluded between the Parties.

ARTICLE XIII

This Agreement shall be without prejudice to the cooperation of either Party with other States and international organizations.

ARTICLE XIV

1. This Agreement shall enter into force upon signature by both Parties and shall remain in force for five years. It may be extended for further five-year periods through an exchange of notes between the Parties.

2. Either Party may at any time give written notice to the other Party of its intention to terminate this Agreement, in which case this Agreement will terminate six months from the date notice is received by the other Party.

3. Expiration of this Agreement shall not affect the implementation of any cooperative activity undertaken pursuant to this Agreement and not fully executed before expiration occurs.

4. This Agreement may be amended by written agreement of the Parties.

IN WITNESS WHEREOF, the undersigned, being duly authorized by their respective Governments, have signed this Agreement.

DONE at PARIS, this 8th day of JANUARY, 1989, in duplicate in the English and Russian languages, both texts being equally authentic.

FOR THE GOVERNMENT OF THE
UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF THE UNION
OF SOVIET SOCIALIST REPUBLICS:

George F. Shultz

Mikhail Gorbachev

ANNEX I

US-USSR JOINT COMMISSION ON COOPERATION IN
THE FIELD OF BASIC SCIENTIFIC RESEARCH

In accordance with Article X of this Agreement:

1. The Parties shall establish a Joint Commission consisting of representatives of both Parties, including their Executive Agents, as set forth in paragraph 4 below, and the parties to the MOUs.
2. Members of the Joint Commission shall serve without compensation.
3. The Joint Commission shall adopt procedures for its operation, and shall ordinarily meet once a year, alternately in the United States and in the Soviet Union.
4. Each Party shall have an Executive Agent to assist the Joint Commission. The Executive Agent of the United States will be the White House Office of Science and Technology Policy (OSTP). The Executive Agent of the Soviet Union will be the USSR State Committee for Science and Technology (GKNT).
5. The Executive Agent of each Party shall designate a Co-Chairperson of the Joint Commission. The Co-Chairperson of the hosting side shall act as Chairperson of the Joint Commission for the duration of that meeting. The Joint Commission shall act by mutual agreement.
6. The Joint Commission shall review, coordinate, and facilitate cooperation in the field of basic scientific research and recommend measures and programs for consideration and subsequent approval by both Parties.

7. The Joint Commission may consider proposals for additions, deletions, or modifications to the list of areas of cooperation in Annex III, which it shall forward to the Parties for their approval. Changes to Annex III which have been approved by the Parties will be submitted in writing to the Joint Commission.

ANNEX II

INTELLECTUAL PROPERTY

Pursuant to Article VIII of this Agreement:

I. GENERAL

A. For purposes of this Agreement, "intellectual property" is understood to have the meaning found in Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm July 14, 1967.

B. The Parties shall ensure adequate and effective protection for intellectual property created or furnished under this Agreement and relevant implementing arrangements thereunder.

II. COPYRIGHTS

The Parties and the partners shall take appropriate steps to secure copyright to works created under this Agreement in accordance with their national laws, except as specifically provided otherwise in an applicable implementing arrangement. Rights to works created under this Agreement shall be determined in the applicable implementing arrangement.

III. INVENTIONS

A. For purposes of this Annex, "invention" means any invention made in the course of cooperation under this Agreement or implementing arrangements thereunder which is or may be patentable or otherwise protectable under the laws of the United States of America, the Union of Soviet Socialist Republics, or any third country. An invention "made" means one conceived or for which an application for patent or other title of protection has been filed or which has otherwise been reduced to practice.

B. Between a Party and its nationals, the ownership of rights and interests in inventions will be determined in accordance with that Party's national laws and practices.

C. As between the Parties, unless otherwise specifically provided in an applicable implementing arrangement, the Parties and the partners shall take appropriate steps to secure rights to implement the following:

1. If the invention is made in the course of a program of cooperative activity that involves only the transfer or exchange of information between the Parties, such as by joint meetings, seminars, or the exchange of technical reports or papers, unless provided otherwise in an applicable implementing arrangement:

a. The Party whose personnel makes the invention ("the Inventing Party") has the right to obtain all rights and interests in the invention in all countries in accordance with applicable national laws of such countries;

b. In any country where the Inventing Party decides not to obtain such rights and interests, the other Party has the right to do so.

2. If the invention is made by personnel of one Party ("the Assigning Party") while assigned to the other Party ("the Receiving Party") in the course of a program of cooperative activity that involves only the visit or exchange of scientific and technical personnel:

a. The Receiving Party has the right to obtain all rights and interests in the invention in all countries in accordance with applicable national laws of such countries;

b. In any country where the Receiving Party decides not to obtain such rights and interests, the Assigning Party has the right to do so.

D. Arrangements involving other forms of cooperation, such as joint research projects with an agreed scope of work, shall provide for the mutually agreed upon disposition of rights to an invention made as a result of such activity on an equitable basis. Except as otherwise specifically agreed, each Party has the right to obtain all rights and interests in the invention in its own country, whereas the right to secure legal protection of that invention in third countries, as well as the right to license or transfer such rights and interests in third countries, shall be allocated by mutual written agreement.

E. Notwithstanding the foregoing, if an invention is of a type for which exclusive rights are available under the laws of one Party but not of the other Party, the Party whose laws provide for exclusive rights shall be entitled to all rights in all countries which provide rights to such invention. The Parties may agree, however, to a different allocation of rights to such invention.

F. The Parties shall disclose to one another inventions made in the course of programs of cooperative activities and furnish to one another any documentation and information

necessary to enable them to secure any rights to which they may be entitled. The Parties may ask one another in writing to delay publication or public disclosure of such documentation or information for the purpose of protecting their respective rights related to inventions. Unless otherwise agreed in writing, such restriction shall not exceed a period of six months from the date of communication of such information. Communication shall be through the parties to the applicable MOUs.

IV. BUSINESS-CONFIDENTIAL INFORMATION

A. The Parties do not expect to furnish to one another or create, or have the partners furnish or create, business-confidential information in the course of cooperation under this Agreement. In the event that such information is inadvertently furnished or created or the Parties agree to furnish such information, the Parties and the partners shall give full protection to such information in accordance with their laws, regulations, and administrative practices.

B. For purposes of this Annex, "business-confidential information" means information of a confidential nature which meets all of the following conditions:

1. it is of a type customarily held in confidence for commercial reasons;
2. it is not generally known or publicly available from other sources;
3. it has not been previously made available by the owner to others without an obligation concerning its confidentiality; and

4. it is not already in the possession of the recipient Party or partner without an obligation concerning its confidentiality.

C. Any information to be protected as "business-confidential information" shall be appropriately identified by the Party or partner furnishing such information or asserting that it is to be protected, except as otherwise provided in the Parties' laws, regulations, and administrative practices. Subject to the aforesaid laws, regulations and administrative practices, unidentified information will be assumed not to be information to be protected, except that a Party to the cooperative activity may notify the other Party in writing, within a reasonable period of time after furnishing or transferring such information, that such information is business-confidential information under the laws, regulations, and administrative practices of its country. Such information will thereafter be protected in accordance with paragraph A above.

V. OTHER TYPES OF INTELLECTUAL PROPERTY

"Other types of intellectual property" means any intellectual property protectable in accordance with the laws, regulations and administrative practices of either Party or any third country other than those described in Articles II, III, and IV above and includes, for example, mask works and trademarks. Rights to other types of intellectual property shall be determined in the same manner as for inventions,

Article III, Paragraphs B-D of this Annex. If an intellectual property is one for which protection is available under the laws of one Party but not of the other Party, the Party whose laws provide such protection shall be entitled to all rights in all countries which protect such intellectual property. The Parties may agree, however, to a different allocation of rights to such intellectual property.

VI. MISCELLANEOUS

A. Each Party and each partner shall take all necessary and appropriate steps to provide for the cooperation of its authors, inventors, and discoverers which is required to carry out the provisions of this Annex.

B. Each Party shall assume the responsibility to pay to its nationals such awards or compensation as may be in accordance with its laws and regulations. This Annex does not create any entitlement or prejudice any right or interest of the author or inventor to an award or compensation for his or her work or invention.

C. Intellectual property disputes arising under this Agreement should be resolved, if possible, through discussions between the concerned partners. If the partners cannot resolve such a disagreement, it shall be settled through consultations between the Parties or their designees.

VII. EFFECT OF TERMINATION OR EXPIRATION

Termination or expiration of this Agreement shall not affect rights or obligations under this Annex.

VIII. APPLICABILITY

This Annex is applicable to any implementing arrangements or cooperation under this Agreement, except as otherwise specifically provided for in individual implementing arrangements.

ANNEX III

AREAS OF COOPERATION

1. Geosciences
2. Basic Scientific Research in Engineering Sciences
3. Scientific Problems of the Arctic and the North
4. Life Sciences
5. Science Policy .
6. Chemistry
7. Mathematics
8. Theoretical Physics

Final

MEMORANDUM OF UNDERSTANDING
ON
COOPERATION IN THE FIELD OF BASIC SCIENTIFIC RESEARCH
BETWEEN
THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA
AND
THE ACADEMY OF SCIENCES
OF THE UNION OF SOVIET SOCIALIST REPUBLICS

The National Science Foundation of the United States of America and the Academy of Sciences of the Union of Soviet Socialist Republics, hereinafter referred to as "the Parties",

HAVE AGREED as follows:

ARTICLE I. GENERAL PROVISIONS

This Memorandum of Understanding is subject to the general principles defined by both Governments in the Agreement between the Government of the United States of America and the Government of the Union of Soviet Socialist Republics on Cooperation in the Field of Basic Scientific Research signed January 8, 1989, hereinafter referred to as the "Basic Scientific Research Agreement," and to the internal regulations and procedures of each Party.

ARTICLE II. DEFINITION

Taking into account that fundamental and applied research involve a continuum of scientific activity, for the purposes of this Memorandum of Understanding, "basic scientific research" means theoretical or experimental research having as its objective the acquisition of fuller knowledge or understanding of the elemental principles of phenomena and observable facts; such research extends the knowledge base from which many societal benefits ultimately flow and, in the framework of this Memorandum of Understanding, such research is not designed for the transformation of new discoveries into applied technologies. The foregoing definition does not preclude subsequent application of knowledge and understanding gained from basic scientific research conducted under this Memorandum of Understanding, subject to the extent of rights under Annex II of the Basic Scientific Research Agreement.

ARTICLE III. PRINCIPLES

1. The aim of this Memorandum of Understanding is to contribute to the broadening of cooperative scientific activities of mutual benefit between scientific institutions, government and nongovernment agencies, higher educational institutions, and individual scientists, specialists and researchers (hereinafter referred to as "partners") of the two countries for the purpose of advancing scientific knowledge by combining the complementary efforts, capabilities, and talents of leading researchers of the two countries, and sharing resources in areas of strong mutual interest and competence.

2. The scope of the cooperation between the Parties will be limited to the list of scientific areas agreed to by both Governments in Annex III of the Basic Scientific Research Agreement.

3. The Parties have jointly identified initial specific topics for cooperation, listed in Annex II of this Memorandum of Understanding, and have agreed to review them periodically as provided in Article VI.

4. This Memorandum of Understanding shall be without prejudice to other agreements and other arrangements concluded between agencies or organizations of the two countries.

5.a. Cooperation under this Memorandum of Understanding shall facilitate and support exchange of scientists and cooperative scientific activities. This cooperation shall consist primarily of three elements: Cooperative Scientific Research Projects, Joint Seminars and Workshops, and Individual Scientific Visits. Other forms of cooperation may be added by agreement of the Parties.

5.b. The main objective of this Memorandum of Understanding will be to promote direct cooperation between scientific institutions and scientists of the two countries based on cooperative scientific research projects approved by the Parties. In connection with this, the primary aim of Joint Seminars and Workshops and of Individual Scientific Visits will be to identify jointly agreed scientific research priorities in the fields of science mutually agreed upon by the Parties and to develop concrete proposals for future cooperative scientific research projects in these fields.

6. Cooperative activities under this Memorandum of Understanding will be conducted in accordance with the respective international obligations, national laws, regulations and procedures of each country.

7. Obligations assumed by the Parties are subject to the availability of funds. Each side will share in the effort and the cost of each specific activity. Although this provision does not require a precise matching of funds, personnel, or facilities in any given activity, both sides agree that on the whole the implementation of cooperation under this Memorandum of Understanding must be balanced and of mutual benefit.

8. The National Science Foundation will be responsible for coordinating all American participation under this Memorandum of Understanding, and the Academy of Sciences of the U.S.S.R. will be responsible for coordinating all Soviet participation. Both Parties will use their best efforts to involve the appropriate higher educational institutions, scientific research institutions, and other scientific organizations not under their jurisdiction.

9. Scientific results and information derived from a specific activity under this Memorandum of Understanding shall be made available to the world scientific community through customary channels in accordance with normal scientific procedures. This provision shall be implemented with due regard for intellectual property rights as specified in Annex II of the Basic Scientific Research Agreement and Article V of this Memorandum of Understanding.

10. Individual scientists, specialists, researchers, and scientific institutions of third countries or international organizations may be invited, upon consent of both Parties, to participate in activities being carried out under this Memorandum of Understanding. The cost of such participation shall normally be borne by the third parties unless both sides agree otherwise in writing.

ARTICLE IV. ORGANIZATION AND ADMINISTRATION

Specific conditions for the organization and administration of the implementation of cooperation under this Memorandum of Understanding, including responsibilities, procedures, and financial arrangements, are set forth in Annex I to this Memorandum of Understanding.

ARTICLE V. INTELLECTUAL PROPERTY RIGHTS

1. Inventions. If an invention is made under this Memorandum of Understanding as a result of cooperative activity within the meaning of Annex II, Section III, Paragraph D of the Basic Scientific Research Agreement, the following provisions shall apply:

- a. Each Party has the right to obtain all rights and interests in the invention in its own country.
- b. If a Party decides not to obtain such rights and interests in its own country, the other Party has the right to do so. However, such rights are subject to a nonexclusive, royalty-free license to the first Party to practice the invention in its own country, with the right to grant sublicenses in that country in accordance with that country's laws and practices.
- c. The Party in whose country the invention was made has first option on obtaining rights in third countries.
- d. In any country where one Party decides not to obtain such rights and interests, the other Party has the right to do so.

2. Copyrights. With reference to Section II of Annex II of the Basic Scientific Research Agreement, the following provisions shall apply to copyright protection for works created under this Memorandum of Understanding:

a. Except as otherwise provided, each Party is entitled to a nonexclusive, irrevocable, royalty-free license under a copyright, secured in accordance with the national laws of either Party, to translate, reproduce, publish, and distribute published scientific, technical, and medical works in its own territory, with the right to grant sublicenses in that country in accordance with that country's laws and practices. Any such copyrighted work shall indicate the names of all persons who participated in the joint work. Either Party is entitled to such a license in third countries upon request.

b. Rights to other copyrighted works shall be allocated in the same manner as Inventions in Annex II, Section III, Paragraph C of the Basic Scientific Research Agreement and Article IV, Paragraph 1 herein. A Party receiving rights pursuant to this provision to copyrighted works which embody business-confidential information shall protect such information in accordance with Section IV of Annex II of the Basic Scientific Research Agreement.

ARTICLE VI. JOINT REVIEW OF COOPERATION

Representatives of the Parties will meet periodically at Washington or Moscow as necessary, but normally once a year, to evaluate the results of the activities under this Memorandum of Understanding, to consider modifications of the program of cooperation, to communicate to each other information about new scientific priorities within their respective countries, and to exchange information on administrative matters relating to implementation of cooperation under this Memorandum of Understanding.

ARTICLE VII. ENTRY INTO FORCE, TERMINATION, MODIFICATION

1. This Memorandum of Understanding will enter into force upon signature by both Parties, and will remain in effect for a period of five years. Either Party may at any time give written notice to the other Party of its intention to terminate this Memorandum of Understanding, in which case this Memorandum of Understanding will terminate six months from the date notice is received by the other Party.

2. The Parties may, by mutual consent in writing, modify this Memorandum of Understanding and the Annexes thereto. They may renew it for additional five-year periods by an exchange of letters. Expiration, termination, or modification of this Memorandum of Understanding shall not affect the implementation or completion of any project that has been jointly approved by the Parties under this Memorandum of Understanding.

DONE at _____, this ____ day of _____ 1989, in the English and Russian languages, both texts being equally authentic.

FOR THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA:

FOR THE ACADEMY OF SCIENCES OF THE
UNION OF SOVIET SOCIALIST REPUBLICS:

ANNEX I

IMPLEMENTING CONDITIONS FOR THE MEMORANDUM OF UNDERSTANDING
ON COOPERATION IN THE FIELD OF BASIC SCIENTIFIC RESEARCH
BETWEEN

THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA

AND

THE ACADEMY OF SCIENCES
OF THE UNION OF SOVIET SOCIALIST REPUBLICS

SECTION I. INTRODUCTION

In accordance with Article IV of the cited Memorandum of Understanding, the National Science Foundation (NSF) and the Academy of Sciences of the U.S.S.R. (ASUSSR) agree upon the following conditions for the organization and administration of Cooperation in the Field of Basic Scientific Research.

SECTION II. ORGANIZATION OF COOPERATION

1. The Parties to this Memorandum of Understanding will be responsible jointly for direct transaction of all policy matters and for the overall coordination of activities under this Memorandum of Understanding. Each Party shall designate an Official who shall be the principal point of contact for the other Party in the conduct of the business of this Memorandum of Understanding.

Additional participating organizations on each side shall also designate Organization Coordinators who shall be the principal points of contact for their organizations.

2. The Parties shall receive, evaluate for merit, and insure conformance with provisions of this Memorandum of Understanding proposals and applications originating from scientists of each side. Proposed activities may be implemented under this Memorandum of Understanding only upon approval by both Parties, as described in Section IV, below.

3. In accordance with the international obligations, national laws, regulations, and procedures of each country, the Parties will seek to facilitate, through collaboration with appropriate authorities, the granting of visas and other forms of official permission for entry to and exit from their respective national territories of participants in specific activities approved by the Parties, and to facilitate waiver of custom duties on equipment and supplies required to carry out such activities.

SECTION III. TYPES OF ACTIVITY

1. Projects of mutually beneficial cooperative scientific research will be designed jointly by interested scientists and scientific research institutions of both countries in direct consultation with each other. Written proposals, based on understandings reached between cooperating scientists, will be submitted concurrently through appropriate institutional channels by the American scientist to the NSF, and by the Soviet scientist to the ASUSSR, for evaluation and determination. These proposals must include the title, the name of the principal investigator and lead organization in each country, a description of the scientific project, the nature of the cooperative activities to be undertaken including major equipment required, anticipated travel, a list of all participants with biographic and bibliographic data, and the proposed starting date and duration. Proposals for cooperative research projects must be submitted at least nine months in advance of the proposed starting date.

2. Joint workshops and seminars may be held in either country for a period of three to five days, normally with no more than five to ten participants from each country, and may include directly related scientific visits. Written proposals for workshops or seminars, based on understandings reached between the American and Soviet scientists or institutions organizing the activity (hereinafter referred to as "organizers"), must clearly identify the proposed organizers as well as other major participants. Such proposals, based on understandings reached between the organizers, will be submitted concurrently through appropriate institutional channels by the American organizer to the NSF, and by the Soviet organizer to the ASUSSR, for evaluation and determination approximately nine months before the proposed meeting date. Although workshops and seminars will ordinarily be binational, the U.S. and Soviet organizers may, on the basis of mutual agreement, invite highly qualified specialists from other countries to participate at their own expense.

3. Individual Short-Term Scientific Visits, usually not in excess of two weeks, may be made by scientists of one country to the other to consult and share scientific research experiences in order to plan cooperative scientific research activities with their colleagues of the other country. A written proposal outlining the purpose and other details of the intended visit will be prepared by the interested scientist and submitted by the American scientist to the NSF, or by the Soviet scientist to the ASUSSR, for evaluation and determination. These proposals must be submitted by the sending Party to the receiving Party at least four months in advance of the start of the visit.

4. The initial emphasis of cooperation under this Memorandum of Understanding will be upon workshops and seminars in the research areas preselected by the Parties. Subsequently, the emphasis will shift to cooperative research projects.

SECTION IV. IMPLEMENTATION

1. Each Party will encourage scientists of its country to initiate direct correspondence or other communication with colleagues of the other country to determine possible interest in developing a cooperative research project or other activity.

2. Proposals will be jointly initiated by interested scientists of both countries as set forth in Section III of this Annex, and will be submitted concurrently to the Parties in each country in accordance with their established regulations and procedures. Each Party will evaluate the proposals submitted to it, determine if funding is available, exchange pertinent information with the other Party, and reach joint decisions with it on submitted proposals to be approved.

3. Final agreement on support of a scientific activity will be established by an exchange of letters or telegrams between the Officials of the Parties. Each such communication will include the exact title of the proposed activity, the names and organizations of the principal investigators of both sides, as well as information about the starting date and duration of the activity. The Parties will endeavor to inform each other about the recommended disposition of each proposal for a cooperative research project or workshop within six months, but in no case more than nine months, of receipt of the proposal. In the case of individual scientific visits, the parties will inform each other within three months.

4. The Parties agree to take all appropriate and necessary action to achieve the fulfillment of the terms and conditions for each activity as specified in the proposal and as officially agreed in writing by the Parties. Subsequent changes to the scope of work, principal participants, or performance period of the activity can be made only if proposed in writing by the investigators and explicitly agreed to by both Parties.

5. Communications dealing with development, implementation, and performance of the proposed or approved activities are carried out directly between the partners, with notification to the Parties.

6. Principal investigators and their institutions whose proposals or applications have been approved for implementation in the manner specified above will be responsible for the performance of the approved activity and for the proper use of funds. Principal investigators of each side will also be responsible for reporting to their respective Parties on the status and progress of their activity.

7. In order to facilitate implementation of this Memorandum of Understanding, partners of one country intending to visit partners of the other country for purposes of developing or implementing cooperation under this Agreement are to so indicate in applying for permission to enter.

SECTION V. FINANCIAL CONDITIONS

1. For all activities under this Memorandum of Understanding, each side will support the basic costs of the activity within the territory of its country. This may include, for example, the salaries of its own scientists, technicians, and other support staff, and the cost of domestic travel, materials and supplies, equipment (including time charges for equipment use), and publication costs.
2. When a participant in an approved activity travels to the other country, the receiving side shall additionally provide, or meet the expense of, the following needs of each foreign visitor: lodging, subsistence, domestic transportation directly connected with the approved scientific objectives, and medical and hospital coverage in case of sickness or accident according to normal practices in each country. Lodging to be provided by the receiving side shall be appropriate to the professional level of the visiting scientist and, as far as possible, to the needs of accompanying dependents. The receiving side shall provide subsistence and other allowances at rates established in Annex III to this Memorandum of Understanding.
3. The Parties agree to review, at the request of either Party, the subsistence allowances provided to American and Soviet visiting scientists under this Memorandum of Understanding and to make any necessary adjustments to Annex III. These adjustments will be made by joint agreement through an exchange of correspondence between the Officials of the two Parties.
4. The sending side shall meet the expenses of the salary and international travel of its own participants to destinations agreed by the Parties in the receiving country.

4. The subsistence allowances described in Paragraph 2' above, and the coverage of expenses related to sickness or accident described in Paragraph 3 above, will be available only for accompanying dependent family members who remain, together with the scientists, in the receiving country for a period of three months or more. Accompanying dependent family members of scientists participating in cooperative scientific research projects and who remain in the receiving country for periods of less than three months may visit at their own expense. Normally, however, dependent family members will not accompany scientists participating in project development activities such as workshops, seminars, or individual short-term scientific visits.

ANNEX II
AREAS AND TOPICS
FOR COOPERATION IN THE FIELD OF BASIC SCIENTIFIC RESEARCH
BETWEEN

THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA

AND

THE ACADEMY OF SCIENCES
OF THE UNION OF SOVIET SOCIALIST REPUBLICS

1. MATHEMATICS

- o Complex analysis
- o Geometry (differential, algebraic, and topology)
- o String theory
- o Differential equations
- o Algebraic structures
- o Representation theory
- o Control theory
- o Dynamical systems
- o Algebra
- o Mathematical physics

2. THEORETICAL PHYSICS

- o Theoretical nuclear physics
- o Relativistic astrophysics
- o Mathematical physics
- o Theoretical atomic, molecular, optical, and plasma physics
- o Cosmic ray physics
- o Condensed matter theory
- o Cosmology

3. SCIENTIFIC PROBLEMS OF THE ARCTIC AND THE NORTH

- o Global biogeochemical cycles
- o Permafrost studies related to world climate change
- o Studies of the magnetospheric cusp

4. GEOSCIENCES

- o Global change
- o Global biogeochemical cycles
- o Regional geology, stratigraphy, and tectonics
- o Paleontology and geochronology
- o Magmatic and metamorphic processes
- o Volcanoes and volcanic processes
- o Paleoclimate and climate change
- o Surficial processes and geomorphology
- o Continental lithospheric seismology, geophysics, and geochemistry
- o Seismic risk and earthquake prediction
- o Continental scientific drilling
- o Physical and chemical properties of the earth's interior
- o Upper mantle studies

5. CHEMISTRY

- o Molecular environmental catalysis
- o Bioelectrochemistry of membranes

6. LIFE SCIENCES

- o Plant biology (flowering research)
- o Cell biology
- o General and cellular physiology
- o Biodiversity
- o Ecology
- o Protein polymorphisms and other molecular-genetic markers in domesticated plants and animals
- o Developmental biology
- o Neurochemistry

7. BASIC RESEARCH IN ENGINEERING SCIENCES

- o Thermal engineering (heat and mass transfer)

8. SCIENCE POLICY

- o Exchange of information on R&D funding, R&D personnel, and R&D policy.

ANNEX III

FINANCIAL CONDITIONS OF COOPERATION
IN THE FIELD OF BASIC SCIENTIFIC RESEARCH
BETWEEN

THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA

AND

THE ACADEMY OF SCIENCES
OF THE UNION OF SOVIET SOCIALIST REPUBLICS

The National Science Foundation and the Academy of Sciences of the U.S.S.R. agree to meet the following expenses of visits by foreign scientists in their countries under the terms of this Memorandum of Understanding on Cooperation in the Field of Basic Scientific Research:

1. lodging appropriate to the professional level of the visiting scientist and, as far as possible, to the needs of accompanying dependent family members, in accordance with the provisions of Paragraph 4 below; and
2. subsistence allowances at rates not less than the following:

	<u>In U.S.S.R.</u>	<u>In U.S.A.</u>
A. Visits of one month or less, per day:	18 Rubles	\$ 30
B. Visits longer than one month, per month, for the visiting scientist:	420 Rubles	\$ 700
Visits longer than three months, per month, for the accompanying spouse:	60 Rubles	\$ 100
For each accompanying dependent child:	50 Rubles	\$ 80

The above sums will be paid to the visiting scientist commencing with his or her first day in the receiving country for participation in research under the terms of this Memorandum of Understanding.

3. Each side will cover expenses related to sickness or accident in accordance with the normal practices in each country.

MEMORANDUM OF UNDERSTANDING
ON
COOPERATION IN GEOSCIENCE

BETWEEN

THE GEOLOGICAL SURVEY OF THE
DEPARTMENT OF INTERIOR
OF THE
UNITED STATES OF AMERICA

AND

THE MINISTRY OF GEOLOGY
OF THE
UNION OF SOVIET SOCIALIST REPUBLICS

The Geological Survey of the Department of the Interior of the United States of America and the Ministry of Geology of the Union of Soviet Socialist Republics, hereinafter referred to as "the Parties," HAVE AGREED as follows:

ARTICLE I. GENERAL PROVISIONS

This Memorandum of Understanding is subject to the general principles defined by both Governments in the Agreement between the Government of the United States of America and the Government of the Union of Soviet Socialist Republics on Cooperation in the Field of Basic Scientific Research signed January 8, 1988, hereinafter referred to as the "Basic Scientific Research Agreement,"

and to the internal regulations and procedures of each Party. Under this agreement, "basic scientific research" means theoretical or experimental research that has as its objective the acquisition of fuller knowledge or understanding of the elemental principles of phenomena and observable facts; such research extends the knowledge base from which many societal benefits ultimately flow, and, in the framework of this agreement, such research is not designed for the transformation of new discoveries into applied technologies. The foregoing definition does not preclude subsequent application of knowledge or understanding gained from basic scientific research conducted under this agreement, subject to the extent of rights under Annex II of the Basic Scientific Research Agreement.

ARTICLE II. PRINCIPLES

1. The aim of this Memorandum of Understanding is to contribute to the broadening of cooperative geoscience research activities of mutual benefit between scientific institutions, government and non-government agencies, higher educational institutions, and individual scientists, specialists, and researchers (hereinafter referred to as "partners") of the two countries for the purpose of advancing scientific knowledge by combining the

complimentary efforts, capabilities, and talents of leading researchers of the two countries and sharing resources in areas of strong mutual interest and competence.

2. The scope of the cooperation between the Parties will be limited to the list of scientific areas agreed to by both Governments in Annex III of the Basic Scientific Research Agreement.

3. The Parties have jointly identified initial specific topics for cooperation, listed in Annex II of this Memorandum of Understanding, and have agreed to review them periodically as provided [below] in Article V.

4. This Memorandum of Understanding shall be without prejudice to other agreements and other arrangements concluded between agencies or organizations of the two countries.

5. Cooperation under this Memorandum of Understanding shall facilitate and support exchange of scientists and cooperative scientific activities and shall consist primarily of four elements: Cooperative Scientific Research Projects; Joint Seminars and Workshops; Individual Scientific Visits; and Exchanges of Scientific Data, Geologic Samples, Publications, and Information. Other forms of cooperation may be added by agreement of the

Parties.

6. Cooperative activities under this Memorandum of Understanding shall be conducted in accordance with the international obligations, national laws, regulations, and procedures of [the two countries] each country.

7. Obligations assumed by the Parties are subject to the availability of funds. Each side will share in the effort and the cost of each specific activity. Although this provision does not require a precise matching of funds, personnel, or facilities in any given activity, both sides agree that on the whole the the implementation of cooperation under this Memorandum of Understanding must be balanced and of mutual benefit.

8. The Geological Survey will be responsible for coordinating all American participation under this Memorandum of Understanding, including that of the National Science Foundation on the U.S. side, and the Ministry of Geology of the USSR will be responsible for coordinating all Soviet participation, including that of the Academy of Science, Union of Soviet Socialist Republics on the Soviet side, as described in Annex I, Section II of this Memorandum. Both Parties will use their best efforts to involve the appropriate higher

educational institutions, scientific research institutions, and other scientific organizations not under their jurisdiction.

9. Scientific results and information derived from a specific activity under this Memorandum of Understanding shall be made available to the world scientific community through customary channels in accordance with normal scientific procedures. This provision shall be implemented with due regard for intellectual property rights as specified in Annex II to the Basic Scientific Research Agreement, and Article IV, of this Memorandum of Understanding.

10. Individual scientists, [scholars] specialists, researchers, and institutions of third countries or international organizations may be invited, upon consent of both Parties, to participate in [projects and programs] activities being carried out under this Memorandum of Understanding. The cost of such participation shall normally be borne by the third parties unless both sides agree otherwise in writing.

ARTICLE III. ORGANIZATION AND ADMINISTRATION

Specific conditions for the organization and administration of the implementation of cooperation under this Memorandum of

Understanding, including responsibilities, procedures, and financial arrangements, are set forth in Annex I to this Memorandum of Understanding.

ARTICLE IV. INTELLECTUAL PROPERTY RIGHTS

1. Inventions. If an invention is made under this Memorandum of Understanding as a result of cooperative activity within the meaning of Annex II, Section III, Paragraph D of the Basic Scientific Research Agreement, the following provisions shall apply:

- a. Each Party has the right to obtain all rights and interests in the invention in its own country.
- b. If a Party decides not to obtain such rights and interests in its own country, the other Party has the right to do so. However, such rights are subject to a nonexclusive, royalty-free license to the first Party to practice the invention in its own country, with the right to grant sublicenses in that country in accordance with that country's laws and practices.
- c. The Party in whose country the invention was made has first option on obtaining rights in third countries.
- d. In any country where one Party decides not to obtain such rights

and interests, the other Party has the right to do so.

2. Copyrights. With reference to Section II of Annex II of the Basic Scientific Research Agreement, the following provisions shall apply to copyright protection for works created under this Memorandum of Understanding:

- a. Except as otherwise provided, each Party is entitled to a nonexclusive, irrevocable, royalty-free license under a copyright, secured in accordance with the national laws of either Party, to translate, reproduce, publish, and distribute published scientific, technical, and medical works in its own territory, with the right to grant sublicenses in that country in accordance with that country's laws and practices. Any such copyrighted work shall indicate the names of all persons who participated in the joint work. Either Party is entitled to such a license in third countries upon request.
- b. Rights to other copyrighted works shall be allocated in the same manner as Inventions in Annex II, Section III, Paragraph C of the Basic Scientific Research Agreement and Article VI, Paragraph 1 herein. A Party receiving rights pursuant to this provision to copyrighted works which embody

business-confidential information shall protect such information in accordance with Section IV of Annex II of the Basic Scientific Research Agreement.

ARTICLE V. JOINT REVIEW OF COOPERATION

Representatives of the Parties will meet periodically in Washington, D.C., and Moscow, as necessary, but normally once a year, to evaluate the results of the activities under this Memorandum, to consider modification of the Program of Cooperation, to communicate to each other information about new scientific priorities within their respective countries, and to exchange information on administrative matters relating to implementation of cooperation under this Memorandum of Understanding.

ARTICLE VI. ENTRY INTO FORCE, TERMINATION, MODIFICATION

1. This Memorandum of Understanding will enter into force upon signature by both Parties, and will remain in effect for a period of five years. Either Party may at any time give written notice to the other Party of its intention to terminate this Memorandum of Understanding, in which case this Memorandum of Understanding will terminate six months from the date notice is received by the other Party.

2. The Parties may, by mutual consent in writing, modify this Memorandum of Understanding and the Annexes thereto. They may renew it for additional

five-year periods by an exchange of letters. Expiration, termination, or modification of this Memorandum of Understanding shall not affect the implementation or completion of any project that has been jointly approved by the Parties ~~under this~~ Memorandum of Understanding.

Done at _____, this _____ day of _____, 1989, in the English and Russian languages, both texts being equally authentic.

FOR THE GEOLOGICAL SURVEY
OF THE DEPARTMENT OF THE
INTERIOR OF THE
UNITED STATES OF AMERICA:

FOR THE MINISTRY OF GEOLOGY
OF THE UNION OF SOVIET
SOCIALIST REPUBLICS:

ANNEX I

IMPLEMENTING CONDITIONS FOR THE
MEMORANDUM OF UNDERSTANDING
ON COOPERATION IN GEOSCIENCE
BETWEEN

THE GEOLOGICAL SURVEY
OF THE
DEPARTMENT OF THE INTERIOR
OF THE
UNITED STATES OF AMERICA

AND

THE MINISTRY OF GEOLOGY
OF THE
UNION OF SOVIET SOCIALIST REPUBLICS

SECTION I. INTRODUCTION

In accordance with Article III of the cited Memorandum of Understanding, the Geological Survey of the Department of the Interior (USGS) of the United States of America and the Ministry of Geology of the Union of Soviet Socialist Republics agree upon the following conditions for the organization and administration of Cooperation in Geoscience.

SECTION II. ORGANIZATION OF COOPERATION

1. The Parties to this Memorandum of Understanding will be responsible jointly for direct transaction of all policy

matters and for the overall coordination of the Program of Cooperation. Each Party shall designate a Chief Coordinator who shall be the principal point of contact for the other Party in the conduct of the business of this Memorandum of Understanding. Additional participating organizations on each side, which initially include the Academy of Science (ASUSSR) on the Soviet side and the National Science Foundation on the U.S. side, shall also designate Organization Coordinators who shall be the principal points of contact for their organizations.

2. The Parties will develop and agree on a joint list of priority geoscience research areas for cooperation. This list will be reviewed annually and may be changed to reflect the research mission objectives of the participating organizations. The Chief Coordinators and Organization Coordinators shall facilitate communication between U.S. and USSR geoscientists to reach common proposals based on the list of priority topics. Proposed activities may be incorporated into the Program only upon approval of both Parties, as described in Section IV, below.

3. In accordance with the international obligations, national laws, regulations, and procedures of each country, the Parties will seek to facilitate, through collaboration with appropriate authorities, the

granting of visas and other forms of official permission for entry into and exit from their respective national territories of participants in specific activities approved by the Parties, and to facilitate the waiver of custom duties on equipment and supplies required to carry out such activities.

SECTION III. TYPES OF ACTIVITY

1. Projects of mutually beneficial cooperative scientific research will be designed jointly by interested scientists and scientific research institutions of both countries in direct consultation with each other. Written proposals, based on understandings reached between cooperating scientists, will be submitted concurrently through appropriate institutional channels by the American scientist to the USGS, and by the Soviet scientist to the Ministry of Geology, for evaluation and determination. These proposals must include the title, the name of the principal investigator and lead organization in each country, a description of the scientific project, the nature of the cooperative activities to be undertaken including major equipment required, anticipated travel, a list of all participants with biographic and bibliographic data, and the proposed starting date and duration. Proposals for cooperative research projects must be submitted no less than four months in advance of the proposed starting date.

2. Joint workshops and seminars may be held in either country and may include directly related scientific visits. Written proposals for workshops or seminars, based on understandings reached between the American and Soviet scientists or institutions organizing the activity (hereinafter referred to as "organizers"), must clearly identify the proposed organizers as well as other

major participants. Such proposals, based on understandings reached between the organizers, will be submitted concurrently through appropriate institutional channels by the American organizer to the USGS, and by the Soviet organizer to the Ministry of Geology, for evaluation and determination no less than four months before the proposed meeting date. Although workshops and seminars will ordinarily be binational, the U.S. and Soviet organizers may, on the basis of mutual agreement, invite highly qualified specialists from other countries to participate at their own expense.

3. Individual Short-Term Scientific Visits may be made by scientists of one country to the other to consult and share scientific research experiences in order to plan cooperative scientific research activities with their colleagues of the other country. Written proposals based on understandings reached between American and Soviet scientists or institutions, will be submitted concurrently through appropriate institutional channels by the American scientist to the USGS, and by the Soviet scientist to the Ministry of Geology, for evaluation and determination no less than three months in advance of the start of the visit.

4. Exchanges of scientific data, geologic samples, publications and information will be encouraged and facilitated by the Parties through established channels.

SECTION IV. IMPLEMENTATION

1. Each Party will encourage scientists in its country to initiate direct correspondence or other communication with colleagues of the other country to determine interest in developing a cooperative research project or other activity.

2. Official proposals will be jointly initiated by interested scientists of both countries as set forth in Section III of this Annex, and will be submitted concurrently to the Parties in each country in accordance with their established regulations and procedures. Each Party will forward an information copy of each proposal to the other Party, evaluate the proposal submitted to it, determine if funding is

available, exchange pertinent information with the other Party, and reach joint decisions with it on submitted proposals to be approved.

3. Final agreement on support of a scientific activity will be established by an exchange of letters or telegrams between the Chief Coordinators of the Parties. Each such communication will include the exact title of the proposed activity and names and organizations of the principal investigators of both sides, as well as information about the starting date and duration of the activity. The Parties will inform each other about the recommended disposition of each proposal for cooperative research activities within three months of receipt of the proposal.

4. The Parties agree to take all appropriate and necessary action to achieve the fulfillment of the terms and conditions for each activity as specified in the proposal and as officially agreed in writing by the Parties. Subsequent changes to the scope of work, principal participants, or performance period of the project, or activity can be made only if officially proposed by the investigators and explicitly agreed to by both Parties.

5. Communications dealing with development, implementation, and performance of the proposed or approved activities are carried out

available, exchange pertinent information with the other Party, and reach joint decisions with it on submitted proposals to be approved.

3. Final agreement on support of a scientific activity will be established by an exchange of letters or telegrams between the Chief Coordinators of the Parties. Each such communication will include the exact title of the proposed activity and names and organizations of the principal investigators of both sides, as well as information about the starting date and duration of the activity. The Parties will inform each other about the recommended disposition of each proposal for cooperative research activities within three months of receipt of the proposal.

4. The Parties agree to take all appropriate and necessary action to achieve the fulfillment of the terms and conditions for each activity as specified in the proposal and as officially agreed in writing by the Parties. Subsequent changes to the scope of work, principal participants, or performance period of the project, or activity can be made only if officially proposed by the investigators and explicitly agreed to by both Parties.

5. Communications dealing with development, implementation, and performance of the proposed or approved activities are carried out

directly between the partners, with notification to the Parties.

6. Principal investigators and their institutions whose proposals have been approved for implementation in the manner specified above will be responsible for the performance of the approved activity. Principal investigators of each side will also be responsible for reporting to their respective Parties on the status and progress of their activity.

7. In order to facilitate the workings of this Memorandum of Understanding, participants or potential participants of one country intending to visit those of the other country for purposes of cooperation under this agreement are to so indicate in applying for permission to enter.

SECTION V. FINANCIAL CONDITIONS

1. For all activities under this Memorandum of Understanding, each side will support the basic costs of the activity within the territory of its country. This shall include, for example, the salaries of its own scientists, technicians, and other support staff, and the cost of domestic travel, supplies, equipment (including time charges for equipment use), and publication charges.

2. When a participant in an approved activity travels to the other

country, the receiving side shall additionally provide, or meet the expense of, the following needs of each foreign visitor: lodging, subsistence, domestic transportation directly connected with the approved scientific objectives, and medical and hospital coverage in case of sickness or accident according to normal practices in each country. Lodging and subsistence to be provided by the receiving side shall be appropriate to the professional level of the visiting scientist.

3. The Parties agree to review, at the request of the other side, the subsistence allowances provided to American and Soviet visiting scientists under this Memorandum of Understanding and to make any necessary adjustments. The adjustments will be made by joint agreement through an exchange of correspondence between the Chief Coordinators of the two Parties.

4. The sending side shall meet the expenses of the salary and the international travel of its own participants to destinations agreed by the Parties in the receiving country.

5. When representatives of either Party visits the other country for official discussions relating to the overall implementation of this Memorandum of Understanding, the receiving side shall provide all

necessary expenses for activities on its territory, including transportation, lodging, and subsistence. Official delegations will be proposed and agreed to in advance.

ANNEX II

LIST OF TOPICS FOR COOPERATION IN GEOSCIENCE RESEARCH

1. Regional geology, stratigraphy, and tectonics
2. Paleontology and geochronology
3. Magmatic and metamorphic processes
4. Volcanoes and Volcanic processes
5. Mineralogy
6. Marine geology, geochemistry, and geophysics
7. Mineral resources
8. Energy resources
9. Water resources
10. Paleoclimate and climate change
11. Surficial processes and geomorphology
12. Continental lithospheric seismology, geochemistry, and geophysics
13. Seismic risk and earthquake prediction
14. Continental scientific drilling
15. Deep earth physical and chemical processes
16. Global change

ARTICLE I

The Parties shall coordinate, facilitate, and support the development and implementation of cooperation in the field of basic scientific research on the basis of the principles of equality, overall reciprocity, and mutual benefit.

ARTICLE II

Taking into account that fundamental and applied research involve a continuum of scientific activity, for the purposes of this Agreement, "basic scientific research" means theoretical or experimental research having as its objective the acquisition of fuller knowledge or understanding of the elemental principles of phenomena and observable facts; such research extends the knowledge base from which many societal benefits ultimately flow, and, in the framework of this Agreement, such research is not designed for the transformation of new discoveries into applied technologies. The foregoing definition does not preclude subsequent application of knowledge or understanding gained from basic scientific research conducted under this Agreement, subject to the extent of rights under Annex II.

ARTICLE III

Cooperation under this Agreement may be implemented in the following forms:

- Joint scientific research projects including the exchange of scientists, specialists, and researchers participating in them as well as exchange of their results;

ANNEX III

AREAS OF COOPERATION

1. Geosciences
2. Basic Scientific Research in Engineering Sciences
3. Scientific Problems of the Arctic and the North
4. Life Sciences
5. Science Policy .
6. Chemistry
7. Mathematics
8. Theoretical Physics

ANNEX II
AREAS AND TOPICS
FOR COOPERATION IN THE FIELD OF BASIC SCIENTIFIC RESEARCH
BETWEEN

THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA

AND

THE ACADEMY OF SCIENCES
OF THE UNION OF SOVIET SOCIALIST REPUBLICS

1. MATHEMATICS

- o Complex analysis
- o Geometry (differential, algebraic, and topology)
- o String theory
- o Differential equations
- o Algebraic structures
- o Representation theory
- o Control theory
- o Dynamical systems
- o Algebra
- o Mathematical physics

2. THEORETICAL PHYSICS

- o Theoretical nuclear physics
- o Relativistic astrophysics
- o Mathematical physics
- o Theoretical atomic, molecular, optical, and plasma physics
- o Cosmic ray physics
- o Condensed matter theory
- o Cosmology

3. SCIENTIFIC PROBLEMS OF THE ARCTIC AND THE NORTH

- o Global biogeochemical cycles
- o Permafrost studies related to world climate change
- o Studies of the magnetospheric cusp

4. GEOSCIENCES

- o Global change
- o Global biogeochemical cycles
- o Regional geology, stratigraphy, and tectonics
- o Paleontology and geochronology
- o Magmatic and metamorphic processes
- o Volcanoes and volcanic processes
- o Paleoclimate and climate change
- o Surficial processes and geomorphology
- o Continental lithospheric seismology, geophysics, and geochemistry
- o Seismic risk and earthquake prediction
- o Continental scientific drilling
- o Physical and chemical properties of the earth's interior
- o Upper mantle studies

5. CHEMISTRY

- o Molecular environmental catalysis
- o Bioelectrochemistry of membranes

6. LIFE SCIENCES

- o Plant biology (flowering research)
- o Cell biology
- o General and cellular physiology
- o Biodiversity
- o Ecology
- o Protein polymorphisms and other molecular-genetic markers in domesticated plants and animals
- o Developmental biology
- o Neurochemistry

7. BASIC RESEARCH IN ENGINEERING SCIENCES

- o Thermal engineering (heat and mass transfer)

8. SCIENCE POLICY

- o Exchange of information on R&D funding, R&D personnel, and R&D policy.

ANNEX II

LIST OF TOPICS FOR COOPERATION IN GEOSCIENCE RESEARCH

1. Regional geology, stratigraphy, and tectonics
2. Paleontology and geochronology
3. Magmatic and metamorphic processes
4. Volcanoes and Volcanic processes
5. Mineralogy
6. Marine geology, geochemistry, and geophysics
7. Mineral resources
8. Energy resources
9. Water resources
10. Paleoclimate and climate change
11. Surficial processes and geomorphology
12. Continental lithospheric seismology, geochemistry, and geophysics
13. Seismic risk and earthquake prediction
14. Continental scientific drilling
15. Deep earth physical and chemical processes
16. Global change

ANNEX I

US-USSR JOINT COMMISSION ON COOPERATION IN
THE FIELD OF BASIC SCIENTIFIC RESEARCH

In accordance with Article X of this Agreement:

1. The Parties shall establish a Joint Commission consisting of representatives of both Parties, including their Executive Agents, as set forth in paragraph 4 below, and the parties to the MOUs.
2. Members of the Joint Commission shall serve without compensation.
3. The Joint Commission shall adopt procedures for its operation, and shall ordinarily meet once a year, alternately in the United States and in the Soviet Union.
4. Each Party shall have an Executive Agent to assist the Joint Commission. The Executive Agent of the United States will be the White House Office of Science and Technology Policy (OSTP). The Executive Agent of the Soviet Union will be the USSR State Committee for Science and Technology (GKNT).
5. The Executive Agent of each Party shall designate a Co-Chairperson of the Joint Commission. The Co-Chairperson of the hosting side shall act as Chairperson of the Joint Commission for the duration of that meeting. The Joint Commission shall act by mutual agreement.
6. The Joint Commission shall review, coordinate, and facilitate cooperation in the field of basic scientific research and recommend measures and programs for consideration and subsequent approval by both Parties.

7. The Joint Commission may consider proposals for additions, deletions, or modifications to the list of areas of cooperation in Annex III, which it shall forward to the Parties for their approval. Changes to Annex III which have been approved by the Parties will be submitted in writing to the Joint Commission.