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DEPARTMENT OF STATE
DIVISION OF LANGUAGE SERVICES

(TRANSLATION)

*original of letter reference
mailed directly to
Mr Sullivan
by Belik.*

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Russian

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Duplicate

May 7, 1974

Mr. E. F. Sullivan
Deputy Special Commissioner
Bureau of Reclamation
Department of the Interior
Washington, D.C., 20240

DOI Waiver Letter In ERU FILE

Dear Mr. Sullivan:

We received your letter No. 1300 of April 3, 1974, with technical literature, and were glad to learn that you agree to organize the first meeting of specialists in the second half of June in the U.S.

The Soviet side is prepared to send a delegation of specialists to the U.S. at that time.

As agreed previously, we will work out, at that meeting, the program for our joint work in the field of automation, and tentatively coordinate it.

Enclosed with this letter you will find the Soviet draft of a cooperative program on that topic. It should be regarded as tentative, subject to further definition and amplification during our meeting in the U.S.

As I pointed out in my previous correspondence, we put as the fundamental aim of our cooperation on this topic the development of a theory and technique for the automated control of technological processes of reclamation systems. To achieve this aim as rapidly as possible, we

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Water Resources

intend to use modern systems methodology: systems analysis, theory of decision making, etc., as well as modern computation and control techniques, methods of automatic control, information and measurement theory.

We would like, in the first place, to separate out the problems concerning automation of the technological processes of water distribution and use, i.e., the basic technological processes in an irrigation system, taken as a unit, and select as a technological object on irrigation system with controlled water intake and water outlets into a closed network. Such systems, provided with power-driven or gravity intake of water from large rivers and reservoirs, and with power-driven outlets of water into the closed irrigation system of a farm, are becoming increasingly important in the U.S.S.R. In view of the above, the first section of Topic III-2 is formulated as "Automatic control systems of technological processes for water distribution and use in irrigation systems with controlled water intake and outlet into a closed system."

After the sides have reciprocally acquainted themselves with the state of research in each country, joint work can be started, at a later date, in the following sections, e.g., "Automatic control systems of technological processes for water distribution and use in irrigation systems with free water intake and arbitrary use." We can then touch upon problems relating to the development of automated information systems for the prediction of the flow of rivers with varying types of water supply, of automated furrow irrigation, etc.

We suggest that investigations relating to the first section be divided into two stages: at the first stage we will resolve scientific-methodological problems, and tackle problems of practical execution at the second stage.

We presume, therefore, that at the first stage such forms of cooperation as joint experimental investigations will prevail. At the second stage, instead, the major emphasis will be placed on an exchange of scientific information, technical documentation and experimental prototypes for comparative testing.

During our talks we would also like to discuss the problem of jointly establishing in our countries automated pilot irrigation systems which, in the future, could become the testing ground for our joint experimental investigations.

Looking forward to meeting you soon,

Respectfully,

[s] for O. A. Bilik
Director, All-Union Research
Institute of the Committee on
Reclamation

True copy: Signature

Enclosures As stated, one copy

Copies of letter, without enclosure,
to:

1. State Committee of Science and Technology
2. Kh. T. Peterson, Counselor, U.S.S.R. Embassy
3. J. L. Tech, Counselor, U.S. Embassy

Draft Program of Cooperation Between the U.S.S.R. and the U.S.A. Within the Framework of the Joint Soviet-American Working Group on Water Resources

Topic III-2: "Methods and Means of Automation and Remote Control of Reclamation Systems"

Approved For Release 9002203/28 : CIA-RDP79-00798A000600100037-1

Division and stages of work on the Topic	Type of work for each division and stage	Executors	Work period	Expected results
		From the : U.S.S.R. : U.S.A.	From the : U.S.S.R. : U.S.A.	
2	3	4	5	6
				7

Division I. Automated Control Systems for Technological Processes of Water Distribution and Use in Irrigation Systems with Controlled Water Diversion and Turnouts to a Closed Network.

Stage I. Theoretical principles of the structure of control systems of technological processes

Development of scientific and methodological problems according to agreed programs. Conducting experimental investigations on each nation's projects following one mutually coordinated method.

Conducting experimental investigations jointly on a single project.

Exchange of scientists for consultations.

Exchange of information and conducting of Soviet-American meetings on the Topic.

1974-1980
Methodological manuals on a system of describing automatic control systems for technological processes of water distribution and use in irrigation systems with controlled water diversion and turnouts to a closed network.

Approved For Release 9002203/28 : CIA-RDP79-00798A000600100037-1

Translator's note: Ministry of Reclamation and Water Management of the U.S.S.R. and the Academy of Sciences of the U.S.S.R.

Division and stages of work on the Topic	Type of work for each division and stage	Executors	Work period	Expected results
		From the U.S.S.R.	From the U.S.A.	
		4	5	
				7

2
 Systems analysis of an irrigation network as a production and technological control unit, for the purpose of formulating specifications for a control system of technological processes.

3
 Establishing evaluation standards and development of criteria for constructing an automatic control system of technological processes.

4
 Selection and substantiation of control concepts and development of technical algorithms for operational control.

5
 Development of the information and technical structure of control systems and basic requirements for the complex of their technical and programming means.

6
 Optimization of the structure and algorithms for control of irrigation systems of a given class.

7
 Development of methods of testing and experimentally operating automatic control systems and of generalizing the experience of industrial control.

No.	Division and stages of work on the Topic	Type of work for each division and stage	Executors From the U.S.S.R. From the U.S.A.	Work period	Expected results	
1	2	3	4	5	6	7
1.	Stage II: Complex of technical and programming means and their use in automated reclamation systems.	Exchange of scientific information and technical documentation. Testing of the recommended means on each nation's projects and proving grounds according to the methods agreed upon.	Minvodkhoz SSSR and AN SSSR	1974- 1980	Soviet-American catalog of technical and programming means with recommendations for their in control systems.	
2.	Means of control and measurement of technological parameters, characterizing the state of control systems.	Joint testing of recommended means on a single project or proving ground.			Method of testing the means and their metric reliability. Technical assignments for lacking (?) means of automation and remote con	
3.	Means of remote control by wire and radio.	Conducting Soviet-American meetings.				
4.	Technical means of processing and decision making.					
5.	Program means - specialized system-oriented programming languages, operation systems, and systems libraries.					
6.	Development of technical assignments for lacking (?) means of control systems for technological processes.					