

No. 19845

**UNITED STATES OF AMERICA
and
FEDERAL REPUBLIC OF GERMANY**

**Memorandum of Understanding concerning co-operative
development of an advanced surface-to-air missile
system (with attachment). Signed at Washington on
16 July 1976 and at Bonn on 22 July 1976**

Authentic texts: English and German.

Registered by the United States of America on 10 June 1981.

**ÉTATS-UNIS D'AMÉRIQUE
et
RÉPUBLIQUE FÉDÉRALE D'ALLEMAGNE**

**Mémorandum d'accord relatif à la mise au point en
coopération d'un système avancé de missiles surface-air
(avec tableau). Signé à Washington le 16 juillet 1976 et
à Bonn le 22 juillet 1976**

Textes authentiques : anglais et allemand.

Enregistré par les États-Unis d'Amérique le 10 juin 1981.

MEMORANDUM OF UNDERSTANDING¹ BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA REPRESENTED BY THE DEPARTMENT OF THE NAVY AND THE GOVERNMENT OF FEDERAL REPUBLIC OF GERMANY REPRESENTED BY THE FEDERAL MINISTRY OF DEFENSE CONCERNING COOPERATIVE DEVELOPMENT OF AN ADVANCED SURFACE-TO-AIR MISSILE SYSTEM

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Section I. INTRODUCTION

1. The Government of the United States of America and the Federal Republic of Germany (hereinafter referred to as the "Participating Governments") respectively represented by the Department of the Navy and the Federal Ministry of Defense having each identified a military requirement for an Advanced Surface-to-Air Missile System for use in the Anti-Ship Missile Defense role, have decided to undertake jointly and cooperatively the development of such a System as a project under the "Memorandum of Understanding Applicable to the United States-Federal Republic of Germany Cooperative Research and Development" dated 1 August 1963.

2. The ASMD Missile System Development Project, initiated by the U.S. Government in 1975 employing technology developed in the Dual Mode Redeye Program and components from several ongoing U.S. Missile programs, is intended to proceed in two phases which are the Validation Phase and the Full Scale Development Phase. It is contemplated also that upon successful completion of the Full Scale Development, the Participating Governments will proceed with a

¹ Came into force on 22 July 1976 by signature, in accordance with section XIII.

cooperative project for the production of their national requirements for the ASMD Missile System. This Memorandum states the terms for the conduct of the Validation Phase and contains provisions regarding the initiation of the Full Scale Development Phase. It is intended, however, that commitment of the Participating Governments to participate in Full Scale Development and Production will be undertaken upon their respective approval and signature of later Memoranda of Understanding.

Section II. OBJECTIVES

1. The overall objective of the cooperative project is the development, evaluation, and production of an ASMD Missile System responsive to the common and particular national requirements of the Participating Governments. Pending the results of the Validation Phase the requirements for the System are described in the U.S. Navy Operational Requirement OR SAA-24 dated 20 May 1975 and FRG Navy Objectives Fue M VII 2 dated 24 May 1976. Deployment in the 1981 time frame is a mutual objective.

2. Under the cooperative project for the development of an ASMD Missile System:

- a. A completely new missile, incorporating subsystems common or similar to existing missiles in the United States inventory, will be developed.
- b. The ASMD Missile System development will be oriented, to the greatest practicable extent, towards the use, as System elements, of equipments (such as search and acquisition radars and passive intercept receivers) developed under separate auspices.
- c. It is envisioned, however, that the development of unique equipment and software for the System will be required.
- d. In addition, every effort will be made during the development process to use existing weapons control, launching systems and range instrumentation equipments in support of the test and evaluation effort.

3. The following are the objectives of the Development Stage and the Production Stage:

a. Development Stage—

- (i) Validation Phase—through the conduct of studies, tests and trials, to obtain performance results and cost information which support national decisions to proceed with Full Scale Development and to formulate technical documentation adequate for the award of Full Scale Development contracts.
- (ii) Full Scale Development Phase—through the conduct of studies, the definition and fabrication of hardware, and the performance of the tests and trials of ASMD Missile System elements; to obtain results pertaining to performance and operational suitability as well as cost information which will support national decisions to proceed with production of the System and to formulate technical documentation adequate for the award of production contracts.

b. Production Stage—the acquisition of production documentation and the quantities of ASMD Missile System corresponding to the national requirements of the Participating Governments.

Section III. SCOPE

1. The following work (as depicted in Figure 1 attached hereto) will be conducted during the Validation Phase:

- a.* Describe the efforts of the Validation Phase.
- b.* Conduct of Validation Phase missile flight test program.
- c.* Performance of design studies and demonstrations related to the ship system elements of the ASMD Missile System, based upon representative configurations.
- d.* Preparation of technical and program documentation, including specifications, required for the placement of contracts for performance of Full Scale Development effort. This documentation will also address the participation of the national industries of both countries in Full Scale Development and, ultimately, in production of the ASMD Missile System. The Prime Contractor selected for the overall development effort will assist in this process.
- e.* As part of the Validation Phase, the U.S. Government will conduct such technical tests and trials, including sea trials, using ships, target and range facilities to the extent usually required with regard to equipment of the type involved in this project.
- f.* Formulation of the terms of a Memorandum of Understanding between the Participating Governments regarding cooperative Full Scale Development, including the terms of the utilization of any background rights involved in this program.
- g.* Preparation of technical and program documentation necessary to permit decisions by the United States Department of Defense and the Federal Ministry of Defense to enter Full Scale Development in late Calendar Year 1977.

2. Should the need arise, the Participating Governments will make available to one another, on a loan basis in accordance with arrangements to be agreed upon, equipments and materials for the conduct of such tests and trials as are considered to be in furtherance of the objectives, and within the scope, of the Validation Phase. Such arrangements shall include provisions whereby the Government furnishing the equipment or material will receive copies of the test reports and other technical information generated during such tests and trials.

Section IV. PRINCIPLES FOR FULL SCALE DEVELOPMENT AND PRODUCTION

1. Should the Participating Governments, after completion of the Validation Phase, decide to continue the cooperative effort, it is envisioned that the following work will be conducted during the Full Scale Development Phase:

- a.* Performance of design studies and demonstrations related to specific ship configurations of the ASMD Missile System.
- b.* Definition, fabrication, test and trial of system hardware.
- c.* Preparation of technical and program documentation necessary to permit production decisions by national authorities of the Participating Governments.

FIGURE III-1

ASMD MISSILE SYSTEM

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* \$2.0M EACH US & FRG

- d. Formulation of the terms of a Memorandum of Understanding between the Participating Governments regarding cooperative production of the ASMD Missile System.
- e. Preparation of technical and program documentation required to enter into production arrangements with industry for the procurement of the requirements of the Participating Governments for the System.

2. The Participating Governments furthermore agree to start the Full Scale Development Phase on the following assumptions:

- a. The FRG may participate in the management of the project, under the terms of the "MOU Applicable to the U.S.-FRG Cooperative Research and Development" dated 1 August 1963, using a senior national representative to communicate the requirements of his government to the U.S. Program Manager. U.S. procedures will be followed throughout.
- b. FRG industry may participate in Full Scale Development to the extent that such participation is not detrimental to the achievement of the program objectives.
- c. Participating Governments share equally rights in technical information which is developed during and is within the cooperative scope of the Validation, Full Scale Development, and Production Phases of the Missile System Program.
- d. When establishing the formula for the sharing of program costs between Participating Governments, due account shall be taken of foreseeable national production requirements.

3. It is contemplated that during the Production Stage, the Participating Governments will cooperatively acquire their individual requirements for the ASMD Missile System and will implement such arrangements as may be agreed to for the installation, test and check-out and cooperative logistic support of such acquired Systems.

Section V. MANAGEMENT

1. The U.S. Department of the Navy will have the overall responsibility for the implementation and management of the Validation Phase, using its own procedures for the technical direction of the project and for negotiation, placing and administering contracts. The U.S. Department of the Navy has appointed the Commander, Naval Sea Systems Command (PMS-404-50) as the Project Manager for the Validation Phase. The Project Manager will be responsible for the management and coordination of the project work. The Project Manager may arrange for the performance of U.S. Navy work which, although related to the ASMD Missile System, is not within the scope of the Validation Phase. The cost of such work, which is outside the scope of the Validation Phase, will be borne by the U.S. Government. The costs of work arranged by the FRG Ministry of Defense which, although related to the ASMD Missile System is not within the scope of the Validation Phase, will be borne by the FRG Government. The Project Manager and his representatives are authorized to establish and maintain direct liaison with designated personnel of the FRG Ministry of Defense for the purpose of implementation of this Memorandum of Understanding. Any event which would significantly affect the schedule or cost of the Validation Phase of the project will be the subject of prompt consultation by the Participating Governments.

2. The FRG Ministry of Defense may assign up to three professional personnel plus necessary support at no expense to the U.S. Government for service in the ASMD Missile System Project Office. The duties of such personnel shall be to assist the Project Manager in reaching a common and mutual understanding of the needs of both Participating Governments. The U.S. Government shall provide, at no additional cost to the FRG Government, suitable office space for such personnel.

Section VI. VISITS TO ESTABLISHMENTS

1. Each Participating Government will, within reason and upon request, permit visits to government establishments, agencies and laboratories, and contractors' industrial facilities in which the work under the cooperative project is being performed, for the purpose of studying such work, by personnel authorized by the other Participating Government who:

- a. Are either its own employees or employees of its contractors who are charged with special tasks within the cooperative project; and
- b. Have the appropriate security clearance.

These visits will be carried out in such manner as not to delay the work.

2. Requests for visits permissible under paragraph 1 by personnel of one nation to an establishment of the other nation will be coordinated through the Project Manager. After approval in principle, a formal visit request forwarding the requisite certificate of security clearance for the personnel making the visit will be transmitted to the host nation.

3. All such visiting personnel will comply with all security regulations and any trade secrets and proprietary technical data disclosed to visitors will be treated as if supplied to the Participating Government sponsoring the visiting personnel.

Section VII. EXCHANGE OF TECHNICAL INFORMATION

1. During the Validation Phase the Participating Governments will exchange information on all aspects of the cooperative project work.

2. In the common security interest each Participating Government undertakes not to transfer to any person not an officer or agent (including contractors performing work in connection with this cooperative project) of that Participating Government, or to any other Government, title to or possession of any equipment, material, or technical data furnished by the other Participating Government under this Memorandum without the prior written consent of the furnishing Government.

3. The technical information to be made available by either Participating Government under this Section and Section VIII of this Memorandum to the other Participating Government is solely for use in monitoring the program of work of the Validation Phase described in Section III of this Memorandum and in the interest of national planning for the introduction of the ASMD Missile System. Any other use of such technical information will be the subject of subsequent consultations between the Governments after completion of the Validation Phase.

4. All exchanges of information under this Memorandum shall be accomplished through the Project Manager.

Section VIII. REPORTS

1. As soon as practicable after entry into effect of this Memorandum of Understanding, the Project Manager will furnish, to the FRG Ministry of Defense, all reports and technical documentation prepared with regard to studies and tests previously performed by the U.S. Navy relating to the 5" Anti-Ship Missile Defense Program, including information such as warhead effectiveness studies and specifications for the missile and launcher. The Project Manager shall also then provide a report which makes an assessment as to the likelihood of achieving compliance with the requirements as set forth in Section II paragraph 1.

2. During the course of the Validation Phase, the Project Manager will furnish to the FRG Ministry of Defense of progress report as of June 30th and December 31st of each year within 60 days following the end of the reporting period. Such report shall contain a detailed statement of the progress made since the submission of the last report and such other related technical and financial information as may be necessary for a full understanding of the status of the project. The foregoing shall not preclude the Participating Governments from agreeing that intermediate special reports responsive to specific FRG Ministry of Defense information requests shall be submitted.

3. A final report will be presented to the FRG Ministry of Defense at the end of the Validation Phase. Such report will include copies of documentation such as specifications, general assembly drawings, sketches, schematic diagrams and photographs.

Section IX. FINANCIAL COMMITMENTS

1. The estimated total cost of the Validation Phase is \$17.0 million of which \$10.5 million is agreed, subject to the provisions of paragraph 2, to be borne by the U.S. Government and \$6.5 million is agreed to be borne by the FRG Government. These agreed shares will be funded by the two Governments in accordance with the following table:

	<i>Year</i>	<i>1975</i>	<i>1976</i>	<i>1977</i>
United States	(FY)	\$5.5M	\$2.0M	\$3.0M
Federal Republic of Germany	(CY)	-0-	\$2.0M	\$4.5M

2. The obligation of the U.S. Government to provide its 1977 contribution is dependent upon the authorization and appropriation of funds by the Congress of the United States.

3. The FRG Government shall effect the payments pursuant to paragraph 1 above by deposit of the amounts thereof in United States of America Dollars into the U.S. Treasury. Payments of the U.S. Government in respect to the Fiscal Years 1975 and 1976 were effected prior to entry into force of this Memorandum. Payment by the U.S. Government for its Fiscal Year 1977 contribution shall be deemed to have been effected upon receipt by the Project Manager of a statement indicating that funds in the stated amount are available for obligation and expenditure. The contribution of the FRG Government for the [year] 1976 shall be paid within 30 days after entry into effect of this Memorandum. The contribution of

the Participating Governments for the year 1977 shall be paid within 60 days after commencement of their respective Fiscal Year 1977.

4. It is noted that, as of the outset of the Validation Phase, no contribution is required to be made by the FRG Government for the costs of the work of the Validation Phase performed in the United States Fiscal Year 1975. Should there be a need, because of unforeseen circumstances, to exceed the \$17 million dollar Validation Phase cost or should the Validation Phase cost be less than the estimated total cost, the cost sharing of the additional funds or the distribution of the unexpended funds will be determined by mutual agreement.

Section X. SECURITY

1. All classified material and information exchanged, held or used in connection with this project will be stored, handled, transmitted and safeguarded in accordance with the provisions of the Security Agreement between the two Governments dated 23 December 1960.

The following security rules will apply:

- a. The Project Manager will draw up the necessary implementing regulations and all will exercise security responsibility within the Project Office. There will be no automatic release of information to non-participating governments. Release of such information will require approval of the Participating Governments.
- b. Each Participating Government will undertake to maintain the security classifications assigned to information or material by the releasing Participating Government and will afford to such information or material the same degree of security protection provided by the releasing Participating Government.
- c. The Participating Government in whose territory work is carried out will determine the security classification to be applied to material and information originating within that country. If any such item contains or discloses identifiable classified information contributed by any of the Participating Governments, the security classification of that item will not be lower than the security classification assigned to such identifiable information by the originating Participating Government.
- d. At any facility wherein classified information furnished by another Participating Government is to be used, the receiving Participating Government shall designate a person of sufficient authority to exercise effectively the responsibilities for safeguarding, at such facility, the information pertaining to this project. After consultation with the appropriate security agencies, this designated person shall be responsible for limiting access to classified material involved in the project to those persons who have been properly cleared and are under a need-to-know obligation. No Participating Government shall provide without the prior consent of the originating Participating Government, information furnished by the originating Participating Government to any facility whose financial, administrative, policy or management control is directed by persons or entities who are nationals of any non-participating state.

Section XI. PARTICIPATION OF ADDITIONAL GOVERNMENTS

Should an additional Government or Governments desire to participate in the cooperative project, the Participating Governments will consult together and, upon mutual agreement that such expanded participation is desirable and appropriate, will jointly negotiate with the applicant Government reasonable and equitable conditions of such participation.

Section XII. TERMINATION

1. The Participating Governments have entered into this Memorandum of Understanding with the intention of carrying through the Validation Phase to completion.

2. If either Participating Government considers it necessary to discontinue its participation in the Validation Phase, the following provisions will apply:

- a. Any proposal for termination will be subject to immediate consultation between the Participating Governments to enable them to fully evaluate the consequences of such termination.
- b. If, after such consultation, the remaining Participating Government decides to continue the Validation Phase, the terminating government shall give 90 days' written notice of its intention to terminate unilaterally, and will continue its participations, financial and otherwise, in the Validation Phase until the expiration of the said period. The terminating government will bear the costs occasioned by its termination, and will submit to the remaining Participating Government final reports on the status of work being performed in its country as of the effective date of the termination.
- c. The withdrawing government will not be liable for any payments for work carried out under this Memorandum after the expiration of the notice period.

3. If the Participating Governments agree to discontinue the Validation Phase on a bilateral basis, each Participating Government will bear its own termination costs and the Participating Governments will enter into arrangements satisfactory to both governments covering the other terms on which the Validation Phase will be terminated.

4. If, in the event of termination, whether unilateral or otherwise, either of the Participating Governments wishes to continue the work being performed in a terminating government's country, then such terminating government will use its good offices, subject to its own laws, policies and defense requirements, to ensure that such work is satisfactorily performed. The government continuing such work will assume full liability for the costs incurred in continuing the work including fair and reasonable management costs. By way of implementation of the foregoing, the U.S. Government agrees that in each contract or arrangement for the performance of work within the scope of this Memorandum of Understanding there shall be included provisions whereby in the event of termination of participation by the U.S. Government, the FRG Government at its request shall be substituted for the U.S. Government as the contracting government under such contract or arrangement.

Section XIII. EFFECTIVE DATE

This Memorandum of Understanding as written in both the English and German languages, each being equally binding, shall become effective upon execution thereof by both Governments.

For the Federal Republic of Germany
represented by the Federal Ministry
of Defense:

[Signed]

EBERHARD
Ministerialdirektor
Abteilungsleiter Rüstung*

(Date): 22. Juli 1976

For the United States of America rep-
resented by the Department of the
Navy:

[Signed]

P. B. ARMSTRONG
Vice Admiral, U.S. Navy
Director, Research, Development, Test
and Evaluation

(Date): 16 July 1976

* In translation reads "Ministerial Director, Chief, Armament Division".