

PATENT PRACTICES
OF THE
FEDERAL AVIATION AGENCY

PRELIMINARY REPORT
OF THE
SUBCOMMITTEE ON
PATENTS, TRADEMARKS, AND COPYRIGHTS
OF THE
COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE
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FOREWORD

This report, prepared by Herschel Clesner, assistant counsel for the Senate Subcommittee on Patents, Trademarks, and Copyrights, reveals that the Federal Aviation Agency in its short existence has developed a patent policy which could well become the model for other regulatory agencies and departments in the Government.

It is interesting to note at this point that the FAA's policy comes the closest of any of the regulatory agencies which are engaged in the contracting of research and development work to meeting the standards of S. 3550, which I introduced in the 86th Congress on May 19, 1960—

to establish a national policy for the acquisition and disposition of patents upon inventions made chiefly through the expenditures of public funds.

The bill provides that—

the United States shall have exclusive right and title to any inventions made by any person in the performance of any obligation arising from any contract or lease executed or grant made by or on behalf of the United States.

Notwithstanding any law, custom, usage, or practice to the contrary no invention resulting from a research contract or grant financed by the United States shall be patented other than in the name of the United States and no patent resulting from such a contract or grant shall be issued, assigned, or otherwise transferred to any person, corporation, or association as compensation under any such contract or grant.

Such a bill needs to be enacted into law if the public interest is to be advanced by patent policy because the Congress has delegated a substantial share of its lawmaking powers to the various agencies. Many of these agencies have become, by a subtle metamorphosis, not the regulators of the segment of commerce entrusted to their supervision by the Congress in their enabling acts, but instead the spokesmen within the Government for that segment. In the absence of a clearly defined patent policy for Government agencies and departments, the several agencies and departments have gone their own several ways. Happily the new Federal Aviation Agency, which came into existence on January 1, 1959, has set out to make the advancement of the public interest the bedrock upon which to build its patent policy.

This is clearly seen in the three features of the policy which have been delineated by Mr. Clesner's study. The FAA necessarily has great power for the adoption of standards respecting aviation devices and systems. In this connection the FAA has adopted a policy of securing in advance from the patent owners of any device or system

about to be adopted by the FAA a written agreement that the patent owners will license the manufacture and sale of any such device or systems to the end that the patent monopoly will not result in a lack of availability of such devices or systems or their purchase at unreasonable prices.

In connection with research and development projects initiated or sustained by the expenditure of public funds, the FAA retains the patent rights to any device or systems developed by such expenditure. This is, of course, only the application within FAA's jurisdiction of the principle set forth in S. 3550.

In a similar regard FAA attempts to recover research and development costs covered by the expenditure of public funds by a system of licensing the manufacture and sale of items developed under its research and development contracts.

This report is 10th in a series dealing with the patent practices of various agencies of the Federal Government. The purpose and scope of these reports has been fully described in the forewords of the first two covering the Tennessee Valley Authority and the National Science Foundation, respectively.

It is interesting to note in closing that in connection with projects financed jointly by the Department of Defense and the Federal Aviation Agency, the FAA's policy has prevailed. Since this policy is one grounded in a firm belief in the advancement of the public interest, it is one which should commend itself to other agencies and departments.

In closing I should emphasize that, while I personally am pleased to find that the FAA is developing a policy which would comport with the Government patent policy that I envisioned when I introduced S. 3550 in the 86th Congress to establish a national patent policy in connection with the expenditures of public funds, publication of Mr. Clesner's study should in no manner be considered as representing an endorsement of that policy by the Subcommittee on Patents, Trademarks, and Copyrights. The study is being printed as a contribution to our knowledge of the patent system and in the hope that its publication will stimulate further thought and discussion upon patent matters in general and Government patent matters specifically.

JOSEPH C. O'MAHONEY,

Chairman, Subcommittee on Patents, Trademarks, and Copyrights, Committee on the Judiciary, U.S. Senate.

DECEMBER 5, 1960.

CONTENTS

	Page
I. Legal authority as to patents.....	1
II. Present practice.....	2
A. Administration.....	2
1. Organization.....	2
2. Performance statistics.....	3
B. Policy as to retention of title.....	3
1. By employees.....	3
2. Contracts and grants.....	4
(a) Procurement contracts.....	4
(b) Research and development contracts.....	4
(c) Under military contracts having potential ap- plication to the Federal Aviation Agency.....	7
(d) Grants.....	8
C. Foreign filing.....	8
1. Employees patents.....	8
2. Contractors and grantees patents.....	8
D. Use of patents by parties retaining title.....	8
1. Employees.....	8
2. Contractors and grantees.....	8
3. The Government.....	8
(a) Directly.....	8
(b) Application of technical standards, rules, and regulations.....	9
III. Agency viewpoint.....	10
A. Judgment as to effectiveness of present policy.....	10

APPENDIX

A. Agency Order Transmittal No. 34, November 1, 1960 and Agency Order No. 56 of the Federal Aviation Agency, November 1, 1960.....	13
B. Federal Aviation Agency, Office of Management Services, Procure- ment Circular No. 1, August 24, 1960.....	14
C. Department of Commerce, Administrative Order 201-8, Regulations Concerning Employee Inventions.....	14
D. "Recovery of Development Costs" clause.....	19
E. "Rights in Data-Unlimited" clause.....	20
F. "Publications" clause.....	21
G. "Other Contractors" clause.....	21
H. "Drawings and Other Data to Become Property of the Government" clause.....	21
I. "New Features in Design" clause.....	22
J. Various "Patent Rights" clauses contained in the existing Federal Aviation Agency's research and development contracts.....	22

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FEDERAL AVIATION AGENCY

I. LEGAL AUTHORITY AS TO PATENTS

The Federal Aviation Act of 1958 (Public Law 85-726; 72 Stat. 740) created the Federal Aviation Agency. This act contains no language specifically relating to the handling of patent matters by the Federal Aviation Agency. However, section 312(b) of the act directs and empowers the Administrator of the Federal Aviation Agency to undertake development work relating to the creation of improved aircraft, aircraft engines, propellers, and appliances (49 U.S.C. 1353(b)). The Administrator is required by section 312(c) to develop, modify, test, and evaluate systems, procedures, facilities, and devices to meet the needs for safe and efficient navigation and traffic control of all aviation (49 U.S.C. 1353(c)). Thus, the Federal Aviation Agency contracts for and carries out projects which may produce inventions. The Agency's employees, as a result of their duties, also have the opportunity to invent or create innovations.

The Federal Aviation Agency has not interpreted section 312(c) as requiring the Agency to develop any special patent or information policy. The only provision in this section which relates to this subject is the final sentence which requires that the military agencies make certain technical information available to the Agency.

Technical information concerning any research and development projects of the military agencies which have potential application to the needs of, or possible conflict with, the common system shall be furnished to the Administrator to the maximum extent necessary to insure that common system application potential is properly considered and potential future conflicts with the common system are eliminated.

The means by which this information is obtained is, the Federal Aviation Agency believes, a matter exclusively within the province of the military agencies.

While the Federal Aviation Agency has not been directly authorized to purchase or sell patent rights, it is the Agency's opinion that this authority exists wherever the purchase or sale of such rights is reasonably required in connection with some authorized Agency activity. Thus, section 312(c) of the Federal Aviation Act of 1958 authorizes the Administrator to develop, modify, test, and evaluate air safety systems, facilities, and devices, and section 307(b) authorizes him to acquire, establish, and improve air navigation facilities. Under this interpretation the Administrator must be presumed to have authority to acquire any patent right required to carry out properly any of these functions, or which come to him as a natural consequence of these activities. The Administrator has broad authority to dispose of property and rights under section 303(c) of the same act.

The Federal Aviation Agency, as other Government agencies, has authority to issue research grants to nonprofit organizations, if it so desires (Public Law 85-934).

II. PRESENT PRACTICE

A. ADMINISTRATION

1. Organization

The Federal Aviation Agency does not, as yet, employ a patent attorney, for the number of inventions developed through contractor and employee research has not warranted such a full-time employee.

The administrative organizations within the Federal Aviation Agency that deal with patent policy and practices are:

The Office of Management Services, under an Assistant Administrator, is responsible for developing procurement policies. The Materiel Policy Division of this Office develops procurement (including patent) policies, formulates the regulations required to carry out these policies, and coordinates them with the other interested or affected organizations both within and outside the Agency.¹

The General Counsel has the responsibility for all legal work in connection with procurement and patent matters. The General Legal Services Division of the Office of the General Counsel, under an Associate General Counsel, provides legal counsel and review in the development and writing of procurement regulations and contract provisions relating to patent and related rights. This Division also processes employee patents, and provides advice on patent problems which arise in connection with the transaction of the Agency's business.

The Bureau of Research and Development, headed by a Director, carries forward, primarily through contract, the Federal Aviation Agency's research and development work. It also tests, evaluates, and recommends new systems and devices being considered for adoption by the Agency. The Contracts Division of this Bureau negotiates or awards the contracts for research and development which contain provisions under which the Government acquires patent and related rights. When the Bureau considers recommending adoption of a system or navigation aid which is subject to privately held patent rights, the Contracts Division also negotiates with the holder of the rights to establish the terms by which the device or system will be made available to the public.

The Bureau of Facilities and Materiel, headed by a Director, is responsible for the procurement of the navigation aids and systems which are installed by the Agency. The Materiel Program Division of this Bureau awards or negotiates procurement contracts which, when appropriate, contain provisions under which the Government acquires patent and related rights.

The Office of Personnel and Training, under an Assistant Administrator, is responsible for developing and formulating personnel policies and practices including (to the extent that this Agency has such authority) those which govern employee-management relations with respect to inventions, beneficial suggestions, awards, and similar matters.

¹ See App. B, p. 14.

As a new agency, with as yet no significant volume of patents, the Federal Aviation Agency feels that the present organization can adequately handle its present patent policies and programs.

2. Performance statistics

The following are the patents which were obtained, applied for, and owned by the Agency (including its predecessor agencies, the Civil Aeronautics Administration and the Airways Modernization Board), during the past 11 years:

Patent No. 2,634,802 for a shoulder harness for occupants of vehicles (including aircraft passengers), issued on April 14, 1953, and assigned to the Department of Commerce, upon application of Philip W. Strumm.

Patent No. 2,832,059 for an outside lighting system for aircraft, issued on April 22, 1958, to Charles Adler, Jr., and assigned to the Civil Aeronautics Administration.

Patent No. 2,809,633 for an adhesive-type oxygen mask issued on October 13, 1957, and assigned to the Department of Commerce, upon application of John J. Swearingen and Ernest B. McFadden, and related patent No. 2,921,581 subsequently issued on January 19, 1960, to John Swearingen, and also assigned to the Secretary of Commerce. Both applications were filed on October 21, 1955.

It is the Department of Commerce's position that these patents are to be administered by the Federal Aviation Agency as they were obtained by predecessor's functions of which are now vested in the Federal Aviation Agency.

Since its creation on January 1, 1959, the Federal Aviation Agency has not filed any patent applications because of the insufficient time to generate and process inventions for patent applications. During this time six patents were issued on applications filed by predecessor agencies. The Government obtained a license to manufacture and use the inventions under five of the patents and the Government was assigned the title to the sixth patent (patent No. 2,921,581—Swearingen).

B. POLICY AS TO RETENTION OF TITLE

1. By employees

The Federal Aviation Agency's policy is governed by Executive Order 10096,² "The Regulations of the Government Patents Board" (37 CFR, Pts. 300, 301), and (by virtue of statutory and internal regulatory provisions continuing in effect for the Federal Aviation Agency the regulations of the Civil Aeronautics Administration) Department of Commerce Administrative Order 201-8.³ These regulations provide that any invention developed in connection with an employee's work, during Government working hours, or developed through the use of Government equipment or facilities is the property of the Government. The Government, if it believes the invention is patentable and valuable, may apply for both domestic and foreign patents in the inventor's name, and require an outright assignment to the Government. The Federal Aviation Agency will also obtain, where the public interest warrants, patents on inventions created by

² Executive Order 10096 promulgated Jan. 23, 1950, 15 F.R. 389. Found as App. A on p. 17 of the "Patent Practices of the Government Patents Board," Report of the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, U.S. Senate, 86th Cong., 1st sess.

³ See App. C, p. 14.

its employees outside their Government employment, retaining a royalty-free, nonexclusive, nontransferable license to use, or have its suppliers use, the patented invention.

2. Contracts and grants

(a) *Procurement contracts.*—No rights to inventions or patents are asked for or received where the procurement is (1) for an off-the-shelf item—for example, a fully developed device where supplies are procured under a standard advertised invitation for bids—or (2) where no part of the price is based upon design or developmental work. In a fixed-price negotiated procurement where the contractor includes in his pricing the cost of design or developmental work, or where, in a cost or cost-plus-a-fixed-fee contract, the cost of design or developmental work will be an allowable cost, the Federal Aviation Agency obtains from the contractor the same rights the Agency receives under research and development contracts.

(b) *Research and development contracts.*—Federal Aviation Agency obtains all useful data, and patent rights to all inventions made under research and development contracts. In the application of this policy, there is no difference in the Agency's treatment of industrial concerns, private research concerns, and educational institutions. Where the Government pays the cost, or pays a price which includes the anticipated cost, of research or developmental work, it is the policy of this Agency to keep rights to any inventions resulting from such work. Where the price to the Government includes the entire cost of the research or development, it is the Federal Aviation Agency's policy to obtain all rights, including title to the patent; where the contractor shares a part of that cost, it is the Agency's policy to share the rights to such inventions, generally in proportion to the respective contributions of the Agency and contractor.

The present policy of the Federal Aviation Agency is represented in practice by the Federal Aviation Agency's standard "Patent Rights" clause used in existing contracts.⁴ The present policy was initiated or evolved as of December 31, 1958. The policy is officially expressed in the Agency's statement on "Retention of Rights"—Federal Aviation Agency, Office of Management Services Procurement Circular No. 1, August 24, 1960,⁵ and Agency Order 56 of the Federal Aviation Agency, November 1, 1960, signed by Elwood Quesada, Administrator.⁶ The Federal Aviation Agency's predecessor, Civil Aeronautics Administration, was never authorized to engage in any substantial amount of research or development. In the few contracts that were let, it followed the same patent practices as the military agencies in that it usually used the ASPR (Armed Services Procurement Regulations) standard "Patent Rights" clause in its development contracts. The ASPR clause gives a license to the Government to manufacture and use the invention, and permits the contractor to own and freely exploit the invention commercially.

The Airways Modernization Board, the other predecessor, was created in 1957 to develop and evaluate air navigation and air traffic systems. Many of the devices which it developed or approved would have to be purchased and installed by private, commercial, and local government aircraft and facility operators. The ASPR "Patent

⁴ App. J, "Patent Rights" clause, pp. 22-23.

⁵ App. B, see p. 14 for circular.

⁶ App. A, see p. 13 for order.

"Rights" clauses were inadequate, in this connection. The Board felt that it would be manifestly unfair for the Government to pay for the development of a device, require the public to use it, and give the company it paid to do the work a monopoly on marketing the device. To insure that the public for which it was developing safety devices would have free use of them without paying royalties to the companies that had been fully paid for developing them, the Airways Modernization Board developed its own language.

The Federal Aviation Agency has integrated the contracting policies of its predecessors, the Civil Aeronautics Administration and Airways Modernization Board, and is adapting and modifying them so the Agency may carry out the purpose of the Federal Aviation Act of 1958.

The Agency's present policy and practice differs from the earlier policy and practice of its predecessors. However, the Federal Aviation Agency has outstanding contracts using the prior ASPR and modified ASPR patent rights language which give greater rights to the contractor than its present standard "Patent Rights" clause. The Agency has also in a number of instances modified its present standard "Patent Rights" clause due to contractor's equities which were considered in the course of negotiating the contract.

The 173 existing Federal Aviation Agency contracts made since the Agency was created have been studied. Their "Patent Rights" clauses disclose the manner by which, in actual practice, the Federal Aviation Agency's patent rights policy operates and has evolved. The various patent clauses found in these contracts have been numbered 1 through 20 and may be found in the appendix of this study.⁷

The Federal Aviation Agency's standard "Patent Rights" clause is clause 1 which may be found in the appendix.⁸ The clause states in part:

Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary⁹ shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon.

The contractor is also obligated to obtain patent agreements from its employees to carry out the purpose of the referred to language and to insert in each subcontract having research or development work as a purpose, provisions which will make the quoted language applicable to the subcontractor and its employees.

⁷ App. J, pp. 22-70.

⁸ App. J, p. 23.

⁹ The term "Secretary" is used in the FAA contracts and regulations to denote the Administrator. This is done in order to be consistent with the terminology of the Federal Procurement Regulations.

"Patent Rights" clause 2 found in appendix J is the latest modification of clause 1, and it further guarantees the developer-contractor a reasonable opportunity of participating in the development of the invention;¹⁰ "Patent Rights" clause 3 is the same clause adapted for use in contracts under which subcontracting is not permitted;¹¹ "Patent Rights" clause 4 is almost identical to clause 1, however, making explicit the Government's obligation to attempt to obtain the patent rights which may result.¹² These "Patent Rights" clauses are contained in 91 of the 173 research and development contracts including all of the most recent ones.

"Patent Rights" clauses 5 and 6 found in appendix J are the Federal Aviation Agency's standard clauses modified to permit the contractor to retain background inventions fully developed by him prior to the date of the contracts.¹³ The Agency states these clauses are used where the contractor has done a substantial amount of company-financed work which will contribute to the equipment being developed under the contract. Three such clauses are found in the Agency's 173 research and development contracts.

"Patent Rights" clause 7 is similar to the standard "Patent Rights" clause, except that it places a time limit on the Government's right to file patent applications, and gives the contractor that right if the Government does not exercise it.¹⁴ This clause was used in one contract in which the Agency reported that the contractor had a very substantial background position.

"Patent Rights" clause 8 is a modification of the Agency's standard "Patent Rights" clause and was used in a single contract during the earliest period of the Agency's present policy.¹⁵ Proposals had originally been solicited on the basis of inclusion of the standard ASPR "Patent Rights" clause, and the Federal Aviation Agency's new policy came into effect during negotiations. Accordingly, a compromise clause was written which limits the Agency's right to dispose of the patent rights only to domestic air safety applications of any resulting inventions and with respect to other applications the Government receives a royalty-free, nonexclusive license as under the Armed Services Procurement Regulations "Patent Rights" clause.

"Patent Rights" clause 9 is a modification of the standard clause which was used once in a contract with a company which the Agency stated had a very substantial background position in the field covered by contract compared to the amount involved in this contract.¹⁶ The contractor was the sole source for necessary work, and insisted on this modification as a condition to its acceptance of the contract. The clause retained for the contractor all rights to its background inventions fully developed prior to the date of the contract, and granted the contractor an irrevocable, royalty-free license to manufacture and use any inventions developed under the contract.

"Patent Rights" clause 10 is adapted from the standard "Patent Rights" clause; it was used in one contract negotiated for the Federal Aviation Agency by the Air Force which was assigned responsibility for awarding this contract in connection with a joint Department of

¹⁰ App. J, p. 23.

¹¹ App. J, p. 23.

¹² App. J, p. 24.

¹³ App. J, pp. 24-25.

¹⁴ App. J, p. 26.

¹⁵ App. J, p. 27.

¹⁶ App. J, p. 28.

Defense-Federal Aviation Agency program.¹⁷ The clause reserves title in the Government but provides that the contractor shall receive either an exclusive or nonexclusive, irrevocable, royalty-free license to manufacture and use any invention patented by the Government in connection with the contract if the contracting officer determines, on the basis of the degree and character of public interest, that the use of the invention involved is slight. Under this clause the contractor may be penalized if he does not submit the required reports and disclosures.

"Patent Rights" clause 11 was used in one contract, just prior to the introduction of the present policy.¹⁸ Under this clause the Administrator has authority to require the contractor to license all qualified manufacturers who wish to produce the invention for aeronautical purposes whenever the contractor has not met the public's need for equipment covered by the invention by supplying it in adequate quantity and at a reasonable price, or with equipment of appropriate quality.

"Patent Rights" clauses 12 through 14 are adaptations from the standard ASPR "Patent Rights" clause, under which the contractor retains title but the Government gets the right to license inventions developed under the contract whenever the contractor fails to develop them in the public interest.¹⁹ The difference between these three clauses lies primarily in the manner in which foreign patent rights are treated. The Agency reported that these clauses are used for projects begun under military contracts when there is an opportunity to renegotiate the terms relating to patent rights; they are also used where the contractor shares, to a very substantial degree, the cost of the development. These clauses are contained in 9 of the Agency's 173 research and development contracts.

"Patent Rights" clause 15 is similar to clauses 12 through 14, but limits the Government's licensing rights under the patented invention to the field of air traffic control.²⁰ It was used only with one contractor, and has been superseded by clause 14, with that contractor.

"Patent Rights" clauses 16 through 20 are the standard ASPR and similar clauses which were used prior to December 31, 1958, in 64 of the 173 research and development contracts.²¹ These clauses have not been used since that date.

(c) *Under military contracts having potential application to the Federal Aviation Agency.*—In instances where contracts are jointly financed by a military agency and Federal Aviation Agency, the Federal Aviation Agency's patent policy has been applied; where contracts are financed exclusively by a military agency, the Department of Defense patent policy, as expressed in the Armed Services Procurement Regulations, applies.

The Agency's policy is to retain and acquire technical information, know-how, specialized processes, and proprietary rights, other than patents, to the same extent that it retains and acquires patent rights.

Where appropriate, the Federal Aviation Agency's practice and contract clauses retain for the Government the sole property rights to notes, designs, drawings, specifications, and technical data, including all proprietary rights of any nature, produced in the performance of

¹⁷ App. J, p. 29.

¹⁸ App. J, p. 30.

¹⁹ App. J, pp. 35-47.

²⁰ App. J, p. 47.

²¹ App. J, pp. 52-70.

the contract;²² it retains for the Government and others authorized by the Government the right to publish, translate, and reproduce any drawings, sound recordings, and writing which are specified to be delivered under the contract;²³ obtains the right of access to inspect and make copies of all notes, designs, drawings, specifications, and technical data pertaining to the work done under the contract;²⁴ and denies to the contractor the right to publish or distribute any information regarding the objectives, results, or conclusions pursuant to the contract without first obtaining the written consent of the Agency.²⁵

Very recently the Agency has incorporated a clause in appropriate contracts which requires the contractor to report or disclose any improvement in design of the articles called for under the uncompleted contract which is not incorporated in the articles to be delivered as well as any alternative or improved method of accomplishing the objectives of the uncompleted contract, which is not employed in the performance of the contract.²⁶ This notice calls for statement and description showing the relationship to the work under the contract and the effect which such an improvement or method would have on the work required under the contract if it were incorporated thereunder.

(d) *Grants*.—The Federal Aviation Agency has made no research grants to nonprofit organizations and, therefore, has not formulated a policy regarding patent rights which might be derived from inventions developed as a result of such research.

C. FOREIGN FILING

1. *Employees patents*

The Federal Aviation Agency has never filed any application for foreign patents.

2. *Contractors and grantees patents*

The Agency obtains the foreign rights to any inventions resulting from work for which it pays the cost of research and development. However, as noted above, the Agency has never filed any applications for foreign patents.

D. USE OF PATENTS BY PARTIES RETAINING TITLE

1. *Employees*

The Agency's policy is to obtain title in accordance with Executive Order 10096.²⁷ The Agency has no information as to the use made of a patent in those instances where the employee retains title.

2. *Contractors and grantees*

The Federal Aviation Agency contractors have filed patent applications on inventions developed under Government research and development contracts, but the Agency is unable at present to provide information on the extent to which such inventions may be used.

3. *The Government*

(a) *Directly*.—As a new organization, the Federal Aviation Agency has not licensed or otherwise disposed of any patent rights acquired

²² App. H, "Drawings and other data to become property of the Government" clause, p. 21.

²³ App. E, "Rights in data-unlimited" clause, p. 20.

²⁴ App. H, "Drawings and other data to become property of the Government" clause, p. 21.

²⁵ App. F, "Publications" clause, p. 21.

²⁶ App. I, "New features in design" clause, p. 22.

²⁷ E. O. 10096, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 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by contract, and the patent rights the Agency has received from other sources have not proved useful to the Government.

Research and development people in the Agency have reported that the patented invention covered by the claims of patent No. 2,634,802 (shoulder harness for aircraft passengers) has been adapted for use in several models of a commercial aircraft. This patent was issued in 1953 and was originally assigned to the Department of Commerce. Under the Department of Commerce's and the Civil Aeronautics Administration's policy the patented invention was available to anyone on a nonexclusive, royalty-free basis and the Department does not sue anyone for infringing patents which are assigned to it. Therefore, in many instances manufacturers do make and use these Government-developed inventions without going through the formal steps of obtaining a license and the Government would not have any direct information as to the invention's use.

The Adler external lighting system for airplanes covered by the claims of patent No. 2,832,059 and assigned to the Government is now being evaluated for air safety and navigational purposes along with the 12 others by the Bureau of Research and Development of the Agency. If this system is recommended by the Bureau and approved by the Agency, it will have considerable commercial use.

There are many other devices under development by this Agency which may be usable commercially. These include a variety of safety devices for installation in aircraft, and ground equipment, designed primarily for air traffic control or navigation but which may be useful in other applications. The Federal Aviation Agency has not yet received any patent rights to these devices. Consequently, the Federal Aviation Agency has not licensed any patents for commercial use, and has had no experience that would indicate whether it was impractical to exploit these patents with or without an exclusive license.

The Agency, at present, neither directly receives nor pays royalties as compensation for the use of patents.

However, the recent contracts of the Federal Aviation Agency which reflect the present "Patent Rights" policy²⁸ also usually contain a "Recovery of Developmental Costs" clause.²⁹ This requires the contractor to make certain payments to the Government where the contractor sells to others equipment which is substantially the same in design or directly derived from that developed by the contractor in carrying out the contract. These payments are up to 7½ percent of the total income received by the contractor when it sells, and 33½ percent of the total income received as royalty or payment for technical data allowing others to sell such equipment. The Government's income recovery is limited, in any event, to the cost for the development of equipment in question.

Under this clause, the contractor is also required to report to the Agency all sales, royalty, and licensing agreements which may be considered subject to the contract and the contractor must promptly at reasonable periods render accurate certified accounts to the Government.

(b) *Application of technical standards, rules, and regulations.*—The Federal Aviation Agency's technical standards, rules, and regulations governing the design, materials, and construction of aircraft, aircraft engines, propellers, appliances, inspection, servicing, overhaul, and

²⁸ App. A, p. 13.

²⁹ App. D, p. 19.

reserve equipment and facilities are usually general in nature, permissive, and involve the application of objective standards. These regulations are addressed to the result to be achieved, rather than the means to be used; the selection of the means is left to the person complying with the standard, rule, or regulation involved. Thus, as a general rule, the Federal Aviation Agency feels that their standards, rules, and regulations in these areas cannot per se require the use of any particular patented device. However, the Federal Aviation Agency does install and approve particular navigation aids and systems which may require the use of some related patented device by the public if it is to benefit from the particular aid or system. In this connection the Agency attempts to make sure that the device will be available in sufficient quantity, with adequate quality, and at reasonable enough price, to satisfy reasonably the public's requirements. The Federal Aviation Agency states it knows of no case in which any technical requirement of the FAA or any establishment by the Agency of a navigation aid or system requiring the use of a complementary patented device by the user, has made it necessary for the user to deal with any particular supplier, or to pay unreasonably high royalties.

When the Federal Aviation Agency considers adopting a particular navigation aid or system which the Agency knows might involve the use by the public of an exclusively held patented invention, the Federal Aviation Agency officials meet with the holder of the patent rights before the decision is made. The interest of the Agency in protecting the public against scarcity, poor quality, and high price is explained, and in every case a written commitment has been given by the patent holder to license a reasonable number of competent manufacturers on fair and reasonable terms.

III. AGENCY VIEWPOINT

A. JUDGMENT AS TO EFFECTIVENESS OF PRESENT POLICY

The Federal Aviation Agency has stated in a letter to Senator Joseph C. O'Mahoney, chairman, Subcommittee on Patents, Trademarks, and Copyrights:

We believe that a policy such as ours under which the Government gets title to inventions is more likely to stimulate commercial development because the inventions will be made more generally available for commercial exploitation.

Our patent policy could return to the Government its investment in the development of a device upon its commercial sale by a licensee of the Government under the patents which the Government might receive.

We feel most strongly that our policy of recovering the Government's cost of developing a product through royalties is equitable and proper. In effect, it provides a mechanism to shift the burden of paying for the development from the general taxpayer to those who benefit from the work, the purchasers of the product.

Under the present policy of this Agency the Government cannot, except through error, be made to pay for the use of inventions resulting from our own research or efforts which we have financed.

The know-how and experience which the contractor has gained under a Government research or development contract gives him an advantage over his competitors in the initial exploitation of any product which results. There is no way to avoid this competitive advantage. However, under a related policy of this Agency, the benefits of this advantage are shared by the public. This related policy, not necessarily dependent upon the existence of patent rights, applies to all our research or developmental contracts which are likely to result in a commercially marketable product. The contractor must agree to pay a royalty to the Government on all commercial exploitation of that product (excluding sales to other Government agencies) until the Government's cost of developing the product is recovered.

There can be no advantage to a particular firm, beyond the initial competitive advantage just discussed, as a result of any action of this Agency which makes use of a particular device necessary or desirable by the public, if the patents to that device have been developed under a Government contract and the Government has taken title to these patents. The Government can insist on terms adequate to protect the public and to insure equal competition when it grants licenses. Where the device has been invented through some firm's own efforts, the policies and practices of the Federal Aviation Agency as described in section II, D, 3b (present practice of use of patents through the Agency's adopted technical standards, rules, and regulations policy) of this report provide, we believe, adequate protection to the public.

* * *

It is our view that the Agency's policy as to the retention of title is an appropriate policy for the acquisition of patent rights by this Agency. We feel that the patent rights obtained through the application of this policy should be exploited to insure a plentiful supply of necessary and useful devices to the public at reasonable price and appropriate quality and to recover to the Government its cost of developing the product.

* * *

We believe that our present patent policy provides maximum utility to the Government and is best suited to promote the public interest. Consequently, in answer to your question, we do not think that a different policy by this Agency would prove more useful to the Government or better promote the public interest.

* * *

We believe that our patent policy does not discourage the making of inventions. Under the standard industry employment contracts, the firm which does our research, developmental, and related work would generally get the

rights to their employees' inventions if the Government did not. It should make no difference to the employee, who actually does the inventing, whether his invention becomes the property of his employer or, under the Federal Aviation Agency policy, the property of the Government.

Consequently, we feel there is no need to depart from our present policy.³⁰

³⁰ Letter of Aug. 8, 1960, from Daggett H. Howard, General Counsel, Federal Aviation Agency, to Senator Joseph C. O'Mahoney.

It is our view that the Agency's policy as to the retention of rights in an employee's invention for the Government is not in itself a departure from the general policy of the Government to retain rights in an employee's invention. The fact that the Government has applied to itself a principle of necessity, and has applied this principle to the retention of rights in an employee's invention, is not a departure from the general policy of the Government to retain rights in an employee's invention.

The fact that the Government has applied to itself a principle of necessity, and has applied this principle to the retention of rights in an employee's invention, is not a departure from the general policy of the Government to retain rights in an employee's invention. The fact that the Government has applied to itself a principle of necessity, and has applied this principle to the retention of rights in an employee's invention, is not a departure from the general policy of the Government to retain rights in an employee's invention.

We believe that our present policy is not a departure from the general policy of the Government to retain rights in an employee's invention. The fact that the Government has applied to itself a principle of necessity, and has applied this principle to the retention of rights in an employee's invention, is not a departure from the general policy of the Government to retain rights in an employee's invention.

APPENDIXES

APPENDIX A

FEDERAL AVIATION AGENCY—AGENCY ORDER TRANSMITTAL No. 34

NOVEMBER 1, 1960.

Attached is Agency Order No. 56, which is effective November 1, 1960.

This order establishes Agency policy regarding the retention of rights to patents and royalties and recovery of costs in connection with negotiated contracts involving research or development.

FEDERAL AVIATION AGENCY—AGENCY ORDER 56

NOVEMBER 1, 1960.

RETENTION OF PATENT AND ROYALTY RIGHTS

1. *Purpose.*—This order states the policy of the Federal Aviation Agency with respect to the retention of rights and recovery of costs in connection with negotiated contracts involving research or development.

2. *Policy.*—In negotiating contracts under which the Government pays a part or all of the costs of research or development, it is the policy of the Federal Aviation Agency to retain, for the benefit of the United States, rights to data and patent rights, in reasonable proportion to the contributions of the Agency and the contractor; and to recover the FAA's contribution toward such research and development through royalties to the Government upon commercial exploitation of the products developed thereby.

3. *Effective date.*—This order is effective November 1, 1960.

E. QUESADA, Administrator.

APPENDIX B

OMS CIRCULAR—FEDERAL AVIATION AGENCY, OFFICE OF MANAGEMENT SERVICES

Procurement Circular No. 1, August 24, 1960

RETENTION OF RIGHTS

Section 1. Purpose.

Section 2. Policy.

Section 3. Effective Date.

1. *Purpose.*—This circular establishes the policy of the Federal Aviation Agency with respect to the retention of rights in negotiated contracts involving research or development.

2. *Policy.*—In negotiating contracts under which the Government pays a part or all of the costs of research or development, it is the policy of the Federal Aviation Agency to retain, for the benefit of the United States, rights to data, patent rights, or royalties, in reasonable proportion to the contributions of the Agency and the Contractor.

3. *Effective date.*—This circular is effective August 24, 1960.

PHILIP I. RYTHER,

*Chief, Materiel Policy Division,
Office of Management Services.*

Distribution: Division Chiefs; OMS; Procurement Manual holders.

Division Chiefs; OMS:
Procurement Manual holders.

APPENDIX C

Administrative Order No. 201-8

UNITED STATES OF AMERICA

DEPARTMENT OF COMMERCE

MANUAL OF ORDERS, PART 2

Date of Issuance: March 18, 1953.

Effective Date: March 18, 1953.

Subject: Regulations Concerning Employee Inventions.

Section 1. Purpose

The purpose of this order is to prescribe the regulations of the Department of Commerce with respect to patent rights in and to inventions made by employees of the Department.

Section 2. Authority

.01 *Executive Order 10096.*—Executive Order 10096 of January 23, 1950, established uniform patent policy with respect to inventions made by employees of the Federal Government under which the Government may acquire title to inventions made by its employees under certain conditions, while providing for the partial or complete retention of rights by employees under other conditions. This order also established a Government Patents Board, the Chairman of which is author-

ized to issue, with the approval of the President, such rules and regulations as are necessary to the administration of the uniform patent policy throughout the Government. In addition, each Government department and independent establishment is directed to take all steps necessary to effectuate the executive order, including the issuance of necessary regulations consistent with provisions of the executive order and the rules and regulations issued thereunder by the Chairman of the Board.

02 Government Patents Board rules and regulations.—Administrative Order No. 5 of the Chairman of the Government Patents Board (16 FR 3927) restates the basic Government patent policy, and sets forth the responsibilities of Government agencies. These responsibilities include (a) the determination of invention, (b) the determination of rights in inventions, (c) the determination as to whether patent protection will be sought, and (d) the furnishing of certain reports to the Chairman of the Government Patents Board.

Section 3. Policy of the Department

It shall be the policy of the Department of Commerce to encourage invention by its employees and to take full cognizance of the rights and interests of its employee inventors, within the limitation of its authority, in making determinations of the respective rights and equities of the Government and of the inventor in an invention made by an employee of the Department of Commerce.

Section 4. Definition of Terms

For purposes of this order, the following definitions shall apply:

1. "Government employee" or "employee" is any officer or employee of the Department, including any part-time consultant or part-time employee except as otherwise may be provided by contract, regulation or practice approved by the Chairman of the Government Patents Board; and
2. "Invention" is any process, machine, manufacture, design or composition of matter or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the patent laws of the United States.

Section 5. Assignment of responsibilities

01 In discharging its responsibilities in connection with the uniform patent policy, the Department of Commerce is charged with:

1. Determining whether the results of research, development or other activity within the Department constitute invention within the purview of Executive Order 10096;
2. Determining, subject to review by the Chairman of the Government Patents Board, the respective rights of the Government and of the inventor in and to any invention made by an employee of the Department of Commerce;
3. Determining, subject to certain exceptions hereafter noted, whether patent protection will be sought by the Department of Commerce for such inventions; and
4. Furnishing reports as required to the Chairman of the Government Patents Board with respect to the determination of rights, the taking of appeals, the filing of applications, and the issuance of patents.

5.02 The General Counsel will carry out these responsibilities for the Department and will also serve as the Department's liaison officer to deal with the Chairman of the Government Patents Board on these and other matters pertaining to employee inventions. In the discharge of his responsibilities as enumerated in Section 5.01 above, exclusive of 5.014, the General Counsel may utilize such representatives, boards, and committees as he deems appropriate, or may delegate his authority in such manner as he deems desirable.

Section 6. Determination of Invention

5.01 Every employee of the Department who believes he has made an invention shall promptly furnish full information regarding the matter to the head of his primary organization unit, or to his designee for this purpose.

5.02 The initial determination as to whether the employee has made an invention within the purview of Executive Order 10096 will be made in the primary organization unit. If it is determined that such an invention has been made, the head of the primary unit will report the invention to the General Counsel with all pertinent facts pertaining thereto. Doubtful cases may also be referred to the General Counsel.

Section 7. Determination of Rights

5.01 *Conditions for assignment.*—The Department of Commerce may require assignment to the Government of the entire right, title and interest in and to inventions made by its employees and to any patents that may be issued on such inventions if it is established that any of the following conditions are present and are sufficiently equitable to justify requirement of assignment:

1. If the invention was made during working hours; or
2. If the invention was made with a contribution by the Government of facilities, equipment, materials, funds or information, or of time or services of other Government employees on official duty; or
3. If the invention bears a direct relation to or was made in consequence of the official duties of the inventor.

5.02 *Definitions of conditions.*—In determining whether any of the conditions set forth above were present in the making of the invention, the following definitions shall apply:

1. Work hours shall mean time spent during either the usual working hours, or overtime, or both;
2. *a.* A contribution of facilities, equipment, materials or funds shall mean that Government facilities, equipment, materials or funds were actually used in connection with the invention and while so used were unavailable for other purposes.
- b.* A contribution of information shall mean that the information used in making the invention was available only by reason of the inventor's official duties and was obtained from sources not otherwise available,
- c.* A contribution of time and services of other Government employees on official duty shall mean that their time or services were utilized during work hours as defined above;
3. Bearing a direct relation to or made in consequence of the official duties of the inventor means that the duties to which the

inventor had been assigned were such that the invention could reasonably be expected to arise therefrom.

03 *When assignment is required.*—When any of the conditions set forth in Section 7.01 as defined in Section 7.02 exist, the domestic rights and, in the discretion of the General Counsel, foreign rights in and to the invention shall belong to the Government if:

1. The conditions are equitably sufficient to justify assignment thereof by the employee to the Government; and

2. The Government has sufficient interest in the invention to require assignment thereof by the employee.

If it should be found that assignment is not required under 1 and 2 above, the employee nevertheless shall be required to grant to the Government a non-exclusive, irrevocable, royalty-free license in the invention and under any patents which may issue thereon, with power to grant licenses for all governmental purposes.

04 *Entire title to invention left to employee.*—When none of the conditions set forth in Section 7.01 exists, the entire right, title and interest in and to the invention shall be left in the employee, subject to law.

05 *When conditions for assignment are presumed to exist.*—It shall be presumed that the conditions of Section 7.01 exist when the employee is employed or assigned:

1. To invent or improve or perfect any process, machine, manufacture, design, or composition of matter;

2. To conduct or perform research or development work, or both;

3. To supervise, direct, coordinate or review Government financed or conducted research or development work, or both; or

4. To act in a liaison capacity among governmental or non-governmental agencies or individuals engaged in such research or development work, or both.

This presumption may be rebutted by the facts or circumstances attendant upon the conditions under which any particular invention is made and shall not preclude a determination (1) that the Government shall leave the entire right, title and interest in and to the invention in the employee, subject to law, or (2) that title shall be left in the employee subject to a license to the Government as set forth in Section 7.03.

06 *Burden of proof.*—Employees assigned for any one or more of the purposes enumerated in Section 7.05 may submit evidence that will enable the General Counsel to establish the absence of any one or more of the conditions of Section 7.01, or that the conditions which exist are insufficient equitably to justify a requirement that assignment be made to the Government of the invention and any patent which may issue thereon. For all other employees, the Government must establish that the conditions of Section 7.01, if present, are sufficient equitably to require an assignment to the Government of the invention and to any patent which may issue thereon.

07 *Foreign rights.*—An assignment of the foreign rights in and to the invention shall be made by the employee, upon request, whenever an assignment of the domestic rights is required.

Section 8. Appeals and Petitions

01 *Appeals.*—Any employee who is aggrieved by a determination of the General Counsel as to his rights to or in an invention he has

made may obtain a review of the determination by filing a written appeal with the Chairman of the Government Patents Board within 30 days after receiving notice of the determination (or such longer period as the Chairman may, for good cause, fix in any case). A copy of each appeal will be filed with the head of the employee's primary organization unit and the General Counsel. The decision of the Chairman of the Government Patents Board upon any appeal made to him shall be final.

.02 In the event an employee files an appeal, the General Counsel shall furnish the Chairman of the Government Patents Board the following information:

1. Description of the invention in sufficient detail to permit a satisfactory review;
2. Name of the inventor and his employment status, including a detailed statement of his official duties and responsibilities at the time of making the invention; and
3. Detailed statement of the nature of the dispute or controversy, together with copies of the agency decision, of any briefs or written arguments that may have been filed, or any statements or other evidence that may have been considered by the primary unit, or of other relevant material.

.03 *Petitions.*—In the event it is determined that the rights in and to an invention are to be left with the employee, a report of such determination is required to be submitted to the Chairman of the Government Patents Board for review. The Chairman will review the determination and his decision respecting the matter shall be final, subject to the right of the employee to submit to the Chairman, within 30 days (or such longer period as the Chairman may, for good cause, fix in any case) after receiving notice of the decision, a petition for reconsideration if the Chairman's decision gives the Government greater rights than the original determination. Copies of such petitions will be filed with the head of the primary unit and the General Counsel.

Section 9. Patent Protection

.01 *General.*—The General Counsel, upon determining that an invention has been made under the conditions specified in Section 7.01, shall determine whether patent protection will be sought in the United States by the Department of Commerce for such invention. A controversy over the respective rights of the Government and of the inventor in any case shall not delay the taking of any action seeking such patent protection. In cases where it is determined that the domestic rights in and to the invention are to be left with the employee, action by the Department of Commerce looking toward such patent protection shall be contingent upon the consent of the inventor.

.02 *Dispute as to rights.*—Where there is a dispute as to whether the Government is to obtain an assignment of the domestic rights in and to the invention or only a license thereunder, the General Counsel will determine whether patent protection will be sought in the United States pending the Chairman's decision on the dispute. If the General Counsel decides that an application for patent should be filed, he will obtain for the Government a non-exclusive, irrevocable, royalty-free license in the invention with power to grant licenses for all governmental purposes, but this shall be without prejudice to acquiring an

assignment to the Government of the entire domestic right, title, and interest in and to the invention should the Chairman so decide.

03. *Rights in the employee.*—Where the General Counsel has determined to leave the domestic rights in and to an invention with an employee subject to a license in favor of the Government and the employee acquiesces in this determination, the General Counsel will, upon the filing of an application for patent and pending review of the determination by the Chairman, obtain for the Government a non-exclusive, irrevocable, royalty-free license in the invention with power to grant licenses for all governmental purposes, without prejudice to the subsequent acquisition by the Government of the entire domestic right, title, and interest in and to, the invention should the Chairman so decide.

Section 10. Scope of Order

The provisions of this order apply to any invention made by an employee on or after January 23, 1950.

Section 11. Effect on Other Orders

Any other orders or parts of orders the provisions of which are inconsistent or in conflict with the provisions of this order are hereby amended or superseded accordingly.

CLARENCE H. OSTHAGEN,
Assistant Secretary of Commerce (Administration).

APPENDIX D

A. RECOVERY OF DEVELOPMENTAL COSTS

a. The Contractor shall pay to the Government 5% of sums hereafter received by the Contractor when it sells, and 33% of all sums received as royalty or payment for technical data under contracts authorizing others to sell, any ----- Equipment which is substantially the same in design as, or which is directly derived from, that developed by the Contractor in the performance of the work called for under this contract, whenever such ----- Equipment is made or sold to others than the Government or an Agency thereof by the Contractor or its privies. Recovery by the Government under this Article shall be limited to its unrecovered cost for the development of this ----- Equipment.

b. The Contractor shall report to the Government all sales, royalty, and licensing agreements, and all receipts therefrom, which might reasonably be considered to be subject to this Article, and the Contractor shall promptly and, at reasonable intervals, render accurate, certified accounts thereon to the Government.

RECOVERY OF DEVELOPMENTAL COSTS

A. The Contractor shall pay to the Government up to 5% (as may be determined by the Contracting Officer to be fair, reasonable and equitable) of sums hereafter received by the Contractor when it sells, or leases, and up to 33% of all sums received as royalty or payment for technical data under contracts authorizing others to sell,

or lease any equipment which is substantially the same in design as, or which is directly derived from, that developed by the Contractor in the performance of the work called for under this contract, whenever such equipment is made, sold or leased to others than the Government or any Agency thereof by the Contractor or its privies. Recovery by the Government under this Article shall be limited to its unrecovered cost for the development of this _____ Equipment by the Contractor.

B. Payments under this clause shall not be so high as to destroy the Contractor's competitive position for the product involved, provided that the product is otherwise reasonably priced and efficiently and economically produced.

C. The Contractor shall report to the Government all sales, leases, royalty and licensing agreements, and all receipts therefrom, which might reasonably be considered to be subject to this article, and the Contractor shall promptly and, at reasonable intervals, render accurate, certified accounts thereon to the Government.

APPENDIX E

B. RIGHTS IN DATA-UNLIMITED

(a) The term "Subject Data" as used herein includes writings, sound recordings, pictorial reproduction, drawings or other graphical representatives, and works of any similar nature (whether or not copyrighted) which are specified to be delivered under this contract. The term does not include financial reports, cost analyses and other information incidental to contract administration.

(b) Subject to the proviso of (c) below, the Government may duplicate, use, and disclose in any manner and for any purpose whatsoever, and have others so do, all Subject Data delivered under this contract.

(c) The Contractor agrees to and does hereby grant to the Government, and to its officers, agents, and employees acting within the scope of their official duties, a royalty-free, non-exclusive and irrevocable license throughout the world, to publish, translate, reproduce, deliver, perform, dispose of, and to authorize others so to do, all Subject Data now or hereafter covered by copyright; *provided* that with respect to such Subject Data not originated in the performance of this contract but which is incorporated in the work furnished under this contract such license shall be only to the extent that the Contractor, its employees, or any individual or concern specifically employed or assigned by the Contractor to originate and prepare such Data under this contract, now has, or prior to completion or final settlement of this contract may acquire, the right to grant such license without becoming liable to pay compensation to others solely because of such grant.

(d) The Contractor shall exert all reasonable effort to advise the Contracting Officer, at the time of delivery of the Subject Data furnished under this contract, of all invasions of the right of privacy contained therein and of all portions of such Data copied from work not composed or produced in the performance of this contract and not licensed under this clause.

(e) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of copyright infringement received by the Contractor with respect to all Subject Data delivered under this contract.

(f) Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

(g) The Contractor shall not affix any restrictive markings upon any Subject Data, and if such markings are affixed, the Government shall have the right at any time to modify, remove, obliterate or ignore any such marking.

APPENDIX F

C. PUBLICATIONS

The Contractor shall not publish, cause to be published, or distribute for public consumption, any information, oral or written, concerning the objectives, results or conclusions made pursuant to performance of this contract, without the prior written consent of the Government.

APPENDIX G

D. OTHER CONTRACTORS

The Government may undertake or award other contracts for additional or related work, and the Contractor shall fully cooperate with such other Contractors and Government employees and carefully fit its own work to such additional work. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor or by Government employees.

APPENDIX H

E. DRAWINGS AND OTHER DATA TO BECOME PROPERTY OF GOVERNMENT

The Contractor agrees that all notes, designs, drawings, specifications and other technical data produced in the performance of this contract shall be the sole property of the Government, including all rights therein of whatever kind and nature. The Contractor further agrees that duly authorized representatives of the Government shall have access, at all reasonable times, to inspect and make copies of all notes, designs, drawings, specifications or other technical data pertaining to the work to be performed under this contract.

APPENDIX I

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NEW FEATURES OF DESIGN

In the event the Contractor, prior to completion of the work hereunder and whether or not in connection with the performance of such work, develops:

(i) any improvement in the design of the articles called for by this contract, which is not incorporated in the articles to be delivered; or

(ii) any alternative or improved method of accomplishing the objectives of this contract, which is not employed in the performance hereof;

the Contractor, unless otherwise required to report or disclose any such improvement or alternative or improved method to the Contracting Officer under any other clause of the contract, shall promptly give notice in writing to the Contracting Officer as to any such improvement or method. Such notice shall include a general description sufficient to show the relationship thereof to work under the contract and a statement giving the Contractor's best appraisal as to the prospective effect or influence which such improvement or method would have on the work required under this contract if such improvement or method were incorporated as a requirement thereunder.

APPENDIX J

VARIOUS "PATENT RIGHTS" CLAUSES CONTAINED IN THE EXISTING FEDERAL AVIATION AGENCY'S RESEARCH AND DEVELOPMENT CONTRACTS

PATENT RIGHTS—CLAUSE 1

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Secretary on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part

of the work under this contract, except, such clerical and manual labor personnel as will have no access to technical data.

(c) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

PATENT RIGHTS—CLAUSE 2

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed; and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Secretary on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

(c) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

(d) If the Government obtains patent rights pursuant to this clause of this contract, the Contractor shall be offered license rights thereto, on terms at least as favorable as those offered to any other firm.

PATENT RIGHTS—CLAUSE 3

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Administrator shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Admin-

istrator on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

PATENT RIGHTS—CLAUSE 4

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time reduced to practice, by the Contractor or its employees, in the course of, in the performance of the work of, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Administrator shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Administrator on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

(c) Where the Government takes title to the rights to any invention, it shall prosecute the patents therefor.

PATENT RIGHTS—CLAUSE 5

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Secretary on all these matters shall be accepted as final and the provisions of the

clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

(c) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

(d) This clause shall not be construed to give the Government any additional rights to any inventions either patented or fully conceived and reduced to practice prior to the date of this contract.

PATENT RIGHTS—CLAUSE 6

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Secretary on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

(c) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

Notwithstanding the provisions of the clause of this contract entitled "Patent Rights" all inventions fully conceived by the Contractor prior to the date of this contract, and either constructively or actually reduced to practice by the Contractor on or before December 31, 1959, through effort not compensated under this contract, shall remain, to the extent that they were, the property of the Contractor.

PATENT RIGHTS—CLAUSE 7

A. Whenever any invention, improvement, or discovery is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees in the performance of the work called for or required under this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon, including a statement as to the extent it will file patent applications if the Government does not. The Secretary

1. Shall determine with reasonable promptness whether or not, and in which countries, the government will file patent applications thereon and shall give Contractor written notice of such determination.

2. With respect to those inventions on which it has determined to file United States patent applications, shall file same within six months from the date complete information relating thereto had been furnished.

3. With respect to those inventions on which it has determined to file foreign applications, shall file same within nine months from the date the corresponding United States patent application was filed, or if one was not filed, within six months from the date the complete information relating to such invention has been furnished.

4. In the event the Secretary elects not to continue the prosecution of any patent application or the maintenance of any patent issuing thereon, shall so notify Contractor not less than sixty days before the expiration of the date for response or other required action.

With respect to such inventions, improvements or discoveries which the Secretary has determined to file, and does file as provided above, the Contractor agrees to deliver to the Contracting Officer such duly executed instruments of assignment and other papers as are necessary to vest in the Government the Contractor's right, title and interest to such applications and patents issuing thereon and the right to apply for and prosecute patent applications thereon, subject to the reservation of an irrevocable, non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such invention, improvement or discovery pertains. Upon the notification to Contractor of the Secretary's determination not to file a patent application with respect to a reported invention, improvement or discovery, or upon the Secretary's failure to file a United States or foreign patent application within the time periods specified above or its election not to continue the prosecution or maintenance of any patent application or patent as specified above, Contractor shall have sole right to file such patent application or to continue the prosecution or maintenance of such patent application or patent, and shall retain, or have reconveyed to it as the case may be, the entire right, title and interest to such application or patent, but shall grant to the Government an irrevocable, non-exclusive, non-transferable and royalty-free license to practice same by or for the Government throughout the world.

B. Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of the "Patent Rights" clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

C. Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract having experimental, developmental or research work as one of its purposes, provisions to effectuate this "Patent Rights" clause and to make it apply also with respect to such experimental, developmental or research work.

D. Notwithstanding the provisions of this "Patent Rights" clause, all inventions conceived by Contractor or its subcontractors prior to the date of this contract, and either constructively or actually reduced to practice on or before the date of this contract through effort not directly compensated under this contract, are not contemplated by said clause and shall remain, to the extent that they were, the property of the Contractor or Subcontractor.

PATENT RIGHTS—CLAUSE 8

(a) Whenever any invention, improvement or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Secretary on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

(c) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

(d) Notwithstanding paragraph (a) hereof, the government's right to dispose of patent rights under this clause shall be limited to air safety applications. With respect to other applications, the government shall receive a royalty-free, nonexclusive license under the terms and conditions of the clause specified in ASPR 9-107.2 in effect on the date of this contract.

(e) It is further understood that the government's right to dispose of patent rights under paragraph (a) hereof does not include authorization to dispose of such rights in any foreign country. The contractor shall have the sole right to file foreign patent applications, with respect to air safety applications, once the Secretary has made a determination with respect to filing domestic applications under paragraph (a) above. In the event the Secretary determines that the government shall have rights under paragraph (a) above in any such invention, improvement or discovery, the Contractor agrees to grant to the government an irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each such invention, improvement, or discovery in the manufacture, use and disposition according to law, of any article or material, and in the use of any method.

PATENT RIGHTS—CLAUSE 9

(a) Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Secretary shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed, and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon. The determination of the Secretary on all these matters shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determination.

(b) Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

(c) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

(d) This clause shall not be construed to give the Government any rights to any inventions either patented or fully conceived and actually or constructively reduced to practice prior to the date of this contract; and further, that the Government in addition agrees and does hereby grant to the contractor, its subsidiaries, and its associated companies (within the corporate structure of which the Contractor is a part) an irrevocable, royalty-free, non-exclusive, non-transferable license to practice any invention arising in connection with the performance of this contract.

PATENT RIGHTS--CLAUSE 10 not subject to contract to assign data, object for good and valuable consideration (1000.33)

a. Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived or for the first time actually or constructively reduced to practice, by the Contractor or its employees, in the course of, in connection with, or under the terms of this contract, the Contractor shall immediately give the Contracting Officer written notice thereof, and shall promptly thereafter furnish the Contracting Officer with complete information thereon; and the Contracting Officer shall have the sole and exclusive power to determine whether or not and where a patent application shall be filed; and to determine the disposition of all rights in such invention, improvement, or discovery, including title to and rights under any patent application or patent that may issue thereon, provided, however, that the Contractor shall retain an irrevocable royalty-free license under any patent or application for patent to manufacture, have manufactured and to use and sell any such invention, improvement or discovery, which license shall be either exclusive (except as against the Government) or non-exclusive, as determined by the Contracting Officer on the basis of the degree and character of public interest in the use of invention, improvement or discovery involved. The determination of the Contracting Officer on all these matters shall be accepted as final to the extent permitted by Public Law 356, 83d Congress and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all of its employees who may be the inventors, will execute all documents and do all things necessary or proper to the effectuation of such determination.

b. Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

c. Except as otherwise authorized in writing by the Contracting Officer, the Contractor will insert in each subcontract, having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

d. The Contractor shall furnish to the Contracting Officer the following information and reports concerning any invention, improvement, or discovery made or conceived hereunder:

(i) A written disclosure promptly after conception or first actual reduction to practice of each such invention, improvement or discovery.

(ii) Prior to final settlement of this contract, a final report listing all such inventions, improvements, or discoveries including all those previously disclosed.

e. If the Contractor fails to deliver to the Contracting Officer the disclosures and reports required by (d) above, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a

reserve of either ten percent of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished such disclosures and reports to the Contracting Officer.

PATENT RIGHTS—CLAUSE 11

A. Definition of "Subject Invention." The term "Subject Invention", as used throughout this clause, means any invention, improvement, or discovery (whether or not patentable) made or conceived or first actually or constructively reduced to practice by the Contractor or its employees, in the course of, in connection with, the supplies furnished or services supplied under the provisions of this contract.

B. Reports of Inventions. The Contractor shall make a written Invention Report to the Contracting Officer promptly after either (a) the conception or (b) first actual or constructive reduction to practice, but in any event as soon as any evidence of utility has been developed (whether related to the subject matter of this contract or some other field of use), of each Subject Invention that reasonably appears to be patentable.

(1) The Report shall be furnished directly to the Contracting Officer, separate and distinct from and independent of any other requirement under this contract for the submission of reports and whether or not reference to the Subject Invention has been made in any progress or other report furnished to the Government.

(2) The Report shall sufficiently describe and identify each Subject Invention, appropriately illustrated by simple sketch or diagram, to permit the invention to be understood and evaluated.

If a patent application is filed promptly by the Contractor in the U.S. Patent Office, a copy of such application furnished promptly to the Contracting Officer shall fully satisfy this initial reporting requirement. The Contractor shall furnish such additional information as the Contracting Officer, in his sole discretion, may require for the purpose of making the disclosure provided for in paragraph D hereof.

(3) The Report shall, in addition, include a statement by the Contractor specifying whether or not a United States patent application claiming such invention has been or will be filed by or on behalf of the Contractor. If the Contractor specifies that such an application will not be filed (or having specified that it will file, thereafter, notifies the Contracting Officer to the contrary), the Contractor shall promptly inform the Contracting Officer of the date and identity of any previous, proposed, or contemplated publication of the invention by, or known to, the Contractor.

(4) Within six (6) months from the date the Invention Report required by this paragraph was in fact received or should have been received by the Contracting Officer (as determined by the Contracting Officer) the Contractor shall notify the Contracting Officer in writing of his election to file or not to file a United States patent application.

C. Certifications. (1) If the contract continues in effect for more than a year, the Contractor shall submit to the Contracting Officer periodic

certifications, not less often than once every twelve (12) month period, commencing with the date of the contract, stating whether or not any Subject Inventions reasonably believed to be patentable were conceived or first actually or constructively reduced to practice during the preceding twelve (12) months. The Contractor shall, in such certifications—

- (a) list any such inventions,
- (b) give references, including date, to each written report, and if any, previously submitted, and
- (c) submit reports and related information as provided in B above if this has not already been done.

(2) Prior to final settlement of this contract, the Contractor shall furnish to the Contracting Officer a final report listing all such inventions including those listed in prior reports and furnishing the information respecting such inventions required by B above if not previously furnished.

D. Disclosure. The Administrator of the Federal Aviation Agency (hereinafter, "Administrator") shall have the right to publish and make disclosure of any Subject Invention, whenever deemed by him in the public interest, after either—

- (1) an application for a United States or foreign patent is filed, or
- (2) the expiration of six (6) months from date the Invention Report, provided in paragraph B of this clause, was in fact received, or should have been received by the Contracting Officer (as determined by the Administrator), whichever is earlier.

E. Assignment of Domestic Rights. The Administrator shall have the further right to require, when he deems such action necessary in order to protect the availability of the invention for the use or benefit of aviation, that all domestic rights in any Subject Invention, including all right, title and interest in, to, and under any patent application and patent that may issue thereon (except, however, for the reservation of a non-exclusive, royalty-free license to the Contractor) be assigned to the Government, at any time after the earlier of any one of the following occurrences:

- (1) The Contractor gives the Contracting Officer written notice of election not to file, or continue prosecution of, an application for a United States Patent; or
 - (2) The Contractor having elected to file and having notified the Contracting Officer, in conformance with B(4) above, of such election, fails to file promptly thereafter (as determined by the Administrator) an application for a United States patent; or
 - (3) An application for a United States patent is filed but is not diligently prosecuted (as determined by the Administrator).
- In addition, the Contractor shall, upon request of the Administrator, promptly furnish him with all information relating to the date and identity of any known publication of such invention made by or known to the Contractor or, where applicable, of any contemplated publication to be made by or known to the Contractor.

F. Assignment of Foreign Rights. The Administrator shall have the further right to require, when he deems such action necessary to protect the availability of the invention for the use or benefit of aviation in another country, or other countries, that all foreign rights

in any Subject Invention, including all right, title and interest in, to, and under any patent application and patent that may issue thereon in such country or countries, be assigned to the Government, at any time, and from time to time, after the earlier of any one of the following occurrences:

(1) The Contractor gives the Contracting Officer written notice of election not to file, or continue prosecution of, an application for a patent in such country or countries; or

(2) Upon the expiration of six (6) months after the right has accrued in the Government, under the provisions of paragraph E of this clause, to require the assignment of domestic rights, application has not been filed by Contractor for patent on Subject Invention in such foreign country or countries; or

(3) Upon the expiration of nine (9) months after date a corresponding United States application is filed, application has not been filed by Contractor for patent on Subject Invention in such foreign country or countries.

G. Other Notices and Inspection of Patent Application. The Contractor shall

(1) give prompt written notice to the Contracting Officer of
(a) date and content of any publication of Subject Invention made prior to the filing of application for United States patent thereon;

(b) date Subject Invention or any embodiment thereof was first in public use or on sale in the United States;

(c) date and content of assignment of any right, title, or interest in Subject Invention, including right, title, or interest in, to, and under any patent application and patent that may issue thereon;

(d) the filing of any application for a United States or foreign patent on Subject Invention;

(e) Contractor's election not to continue prosecution of any United States patent application on Subject Invention not less than sixty (60) days before expiration of the response period; and

(f) issuance of an United States or foreign patent on Subject Invention; and

(2) furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application covering Subject Invention.

H. License to Government. The Contractor shall grant, or cause to be granted, and the Contractor does hereby grant, unto the Government an irrevocable, nonexclusive, royalty-free license or licenses to practice and cause to be practiced, by or for the United States Government throughout the world, each Subject Invention (whether patented or unpatented) in the manufacture, use, or disposition according to law, of any article or material, or in the use of any method or process.

I. Licensing by Government.

(1) The Contractor shall grant, or cause to be granted, and the Contractor does hereby grant unto the Government, the right, subject only to the limitations provided for in subparagraph (3) of this paragraph, exercisable at any time or from time to time subsequent to the Contractor's filing of a patent application on any Subject Invention, to dedicate to the public all rights in the

invention or to issue (under or in anticipation of the issuance of any patent on the Subject Invention) non-assignable, non-exclusive licenses (for the practice of the invention for the use or benefit of aviation) and revocable by the Government only, royalty-free without regard to prior license or agreement which may have required payment of royalties, on a nondiscriminatory basis to all applicants determined by the Administrator in his sole discretion to be qualified, to use, manufacture and sell embodiments of the invention, whether related to a product, process or otherwise, for the use or benefit of aviation, when and if the Administrator finds that the Contractor has not met the public need and that the public dedication or additional licensing by the Administrator is necessary in the public interest.

(2) Contractor agrees that any license or other privilege of use issued to any other person under or in anticipation of the issuance of any patent, whether with or without royalty or on an exclusive or non-exclusive basis for the practice of Subject Invention, shall be made only after furnishing notice to such licensee or permittee of the terms of this clause and shall further be made subject to the provisions hereof.

(3) The right of the Administrator to issue the licenses provided for in I(1) above shall be exercisable in conformance with the procedures hereinafter provided and only after:

(a) The Administrator has obtained and considered the advice, to the extent, on such terms, and with respect to such matters or issues as he in his sole discretion determines suitable, of such advisory bodies or consultants as he deems appropriate and competent in the particular situation; and

(b) thereafter, the Administrator has notified the Contractor, in writing, that he has ground to believe that such invention is at such stage of development that if it were more generally available it would meet an aviation need and that the public interest, with respect to an adequate supply, at a reasonable price consistent with normal trade practices under competitive conditions, or maintenance of quality, requires the invention to be available to others than the Contractor and his licensees and, accordingly, the public interest requires the exercise of the right provided for in I(1) above, stating the reasons therefor. Such notice shall contain a request that the Contractor, within a time specified in such notice,

take appropriate steps, which may include the issuance of licenses to additional manufacturers of the Contractor's own selection, to meet the public need. If upon the expiration of the time specified, or such extension thereof as may be approved by the Administrator, the Administrator finds that the Contractor has failed to take appropriate steps adequate to meet the public need, he shall notify the Contractor, in writing, with reasons therefor that at the end of ninety (90) days from the date of mailing such notice he will exercise the rights provided for in I(1) above.

If within twenty (20) days of receipt of such notice the Contractor files with the Administrator a request, in writing, for a hearing, the Administrator, or a representative or representatives designated by him for the purpose, shall promptly afford the Con-

Contractor a reasonable opportunity to be heard (at a time and place to be selected by the Administrator) to be represented by counsel, to present any pertinent information and argument, and to rebut any other information pertinent to the issues. A copy of the written findings by the Administrator or such representative shall be furnished to the Contractor, which findings shall be based solely on the material presented at the hearing, and shall be final and conclusive upon the Contractor. If the Administrator's decision, based upon such findings, be that the Contractor has not met the public need and that dedication and/or additional licensing by the Administrator is necessary in the public interest, he may so dedicate or license effective at the end of the above-mentioned ninety (90) day period or at the conclusion of the hearing, whichever is later.

J. Inventions by Federal Employees. Notwithstanding any provision contained in this contract, Subject Inventions made by Federal employees, or by Federal employees jointly with others, shall be submitted for and subject to determinations, procedures, and disposition under and pursuant to the terms of applicable Executive Orders and other Federal Regulations as in effect on the date of execution of this contract.

K. Conclusiveness and Implementation of Determinations by the Administrator. Determinations of the Administrator on all matters specified in this clause as being for his determination (or in Executive Orders and/or Federal Regulations referred to in paragraph J hereof) shall be accepted as final and the provisions of the clause of this contract entitled "Disputes" shall not apply; and the Contractor agrees that it will, and warrants that all its employees who may be the inventors will, execute all documents and do all things necessary or proper to the effectuation of such determinations.

L. Patent Agreements Between Contractor and Persons Performing Work Under this Contract. Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall obtain patent agreements to effectuate the provisions of the clause from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will have no access to technical data.

M. Subcontract Provisions. Except as otherwise authorized in writing by the Contracting Officer the Contractor shall insert in each subcontract having experimental, developmental, or research work as one of its purposes, provisions making this clause applicable to the subcontractor and its employees.

N. Effective Period of, and Required References to, Provisions of this Clause. All provisions of this clause shall survive and extend beyond the termination, expiration, and final payment under this contract, any extensions or modifications thereof, and such successive contracts as may follow, and continue to be fully effective and enforceable. The exercise of any right or power by the Administrator or the Government pursuant to the provisions of this clause shall in no event and in no manner be deemed as an exclusive election of rights or constitute a waiver of subsequent additional exercise thereof or of any other right or power of the Administrator or the Government provided in this clause or elsewhere in this contract. Any right, title or interest in or to Subject Invention, or in, to, or under any patent application or patent that may issue thereon, shall be subject to the

provisions of this clause, whether created by contract, assignment, license, or otherwise; and each such instrument shall so provide and include reference to this clause; and such provision and reference shall further appear, where practicable, in any domestic patent application and patent which may issue on Subject Invention.

PATENT RIGHTS—CLAUSE 12

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means any invention, improvement, or discovery (whether or not patentable) conceived or first actually reduced to practice either—

(A) in the performance of the experimental, developmental, or research work called for or required under this contract; or

(B) in the performance of any experimental, developmental, or research work relating to the subject matter of this contract which was done upon an understanding in writing that a contract would be awarded;

provided that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontract set forth in (c), (h), and (i) below) who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower tier subcontract or subcontractor under this contract.

(b)(1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition of any article or material, and in the use of any method; with the right in the Government to sublicense others to practice each Subject Invention in the manufacture, use and sale of any article or in the use of any method for the purpose of providing supplies or services to the general public in the furtherance of the public interest.

(2) With respect to:

(i) any Subject Invention made by other than Technical Personnel;

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the experimental, developmental, or research work specified in (a) (i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d) (ii) (B) or (d) (iv) below, and to convey foreign rights as provided in (e) below,

shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to others solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in the interim reports.

(d) In connection with each Subject Invention referred to in (c) (i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decides not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specifies that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notifies the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's right, title, and interest aforesaid; and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the rights of the Contractor in foreign applications as provided in (e) below, and subject further to the reservation of a non-exclusive

and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) The Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention;

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above; and

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights herein agreed to be granted to the Government;

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall, as between the parties hereto, have the exclusive right to file applications on Subject Inventions in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer.

The Contractor shall, upon written request of the Contracting Officer convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a nonexclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sublicenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (c)(i) above shown to be due in accordance with any interim report delivered under (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand

dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

- (i) the final report required by (c)(iii) above;
- (ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above, or in accordance with such final reports, or are otherwise known to be unreported; and
- (iii) the information as to any subcontractor required by (h) below.

The maximum amount which may be withheld under this paragraph (f) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of a patent rights clause containing all the provisions of this Patent Rights clause except provisions (f) and (i) in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept such a patent rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer or unless there has been a waiver of the requirement as hereinafter provided. The Contractor, if unable to comply with the requirement that such a patent rights clause be included in a subcontract after exerting all reasonable effort to do so, may submit to the Contracting Officer a written request for waiver or modification of such requirement. If, within thirty-five (35) days after the receipt of such request, the Contracting Officer does not mail or otherwise furnish the Contractor written denial of such request or notification that the Government requests the Contractor's cooperation with the Government, which the Contractor agrees to provide, in negotiating with the subcontractor for the acceptance of a suitable patent rights clause, the requirement shall be deemed to have been waived by the Contracting Officer as to all patent rights provisions with respect to Subject Inventions, except such provisions, if any, relating to the production or utilization of special nuclear material or atomic energy. Such request shall specifically state that the Contractor has used all reasonable effort to comply with said requirement and shall cite the waiver provision hereinabove set forth. The Contractor is not required when negotiating with a Subcontractor, to obtain in behalf of the Government any rights in subject Inventions other than as provided herein. However, the Contractor is not precluded from separately negotiating with a subcontractor for rights in Subject Inventions for the Contractor's own behalf, but any costs so incurred shall not be considered as an allowable charge or cost under this contract. Reports, instruments, and other information required to be furnished by a subcontractor to the

Contracting Officer under the provisions of such a patent rights clause in a subcontract hereunder may, upon mutual consent of the Contractor and the subcontractor (or by direction of the Contracting Officer) be furnished to the Contractor for transmission to the Contracting Officer.

PATENT RIGHTS—CLAUSE 13

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means any invention, improvement, or discovery (whether or not patentable) conceived or first actually reduced to practice in the course of, in the performance of the work of, or under the terms of this contract; provided that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts set forth in (g) below) who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions, or whose employment agreement with the Contractor provides for his assignment of patents to the Contractor.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(iv) The term "public interest" shall include all matters coming under the jurisdiction of or which may be promoted, regulated or controlled by any agency of the U.S. Government.

(b)(1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition of any article or material; and in the use of any method; with the right in the Government to sublicense others to practice each Subject Invention in the manufacture, use and sale of any article or in the use of any method for the purpose of providing supplies or services to the general public in the furtherance of the public interest.

(2) With respect to:

(i) any Subject Invention made by other than Technical Personnel;

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the work specified in (a)(i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, and to convey foreign rights as provided in (e) below, shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other

compensation to others (except those whose rights derive from the Contractor or its technical personnel) solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c) (i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decides not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specifies that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notifies the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's right, title, and interest aforesaid, and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the rights of the Contractor in foreign applications as provided in (e) below, and subject further to the reservation of a non-exclusive

and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) The Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention;

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above; and

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights and any sublicensing rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall, as between the parties hereto, have the exclusive right to file applications on Subject Inventions, subject to the Government's right to sublicense, in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer.

The Contractor shall, upon written request of the Contracting Officer, convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a non-exclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sublicenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (c)(i) above shown to be due in accordance with any interim report delivered under (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the

amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside; such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

- (i) the final report required by (c)(iii) above;
- (ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above, or in accordance with such final reports, or are otherwise known to be unreported; and
- (iii) the information as to any subcontractor required by (g) below.

The maximum amount which may be withheld under this paragraph (f) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of a patent rights clause containing all the provisions of this Patent Rights clause except provision (f) in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept such a patent rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer or unless there has been a waiver of the requirement as hereinafter provided. The Contractor, if unable to comply with the requirement that such a patent rights clause be included in a subcontract after exerting all reasonable effort to do so, may submit to the Contracting Officer a written request for waiver or modification of such requirement. If, within thirty-five (35) days after the receipt of such request, the Contracting Officer does not mail or otherwise furnish the Contractor written denial of such request or notification that the Government requests the Contractor's cooperation with the Government, which the Contractor agrees to provide, in negotiating with the subcontractor for the acceptance of a suitable patent rights clause, the requirement shall be deemed to have been waived by the Contracting Officer as to all patent rights provisions with respect to Subject Inventions, except such provisions, if any, relating to the production or utilization of special nuclear material or atomic energy. Such request shall specifically state that the Contractor has used all reasonable effort to comply with said requirement and shall cite the waiver provision hereinabove set forth. The Contractor is not required when negotiating with a subcontractor, to obtain in behalf of the Government any rights in Subject Inventions other than as provided herein. However, the Contractor is not precluded from separately negotiating with a subcontractor for rights in Subject Inventions for the Contractor's

own behalf, but any costs so incurred shall not be considered as an allowable charge or cost under this contract. Reports, instruments, and other information required to be furnished by a subcontractor to the Contracting Officer under the provisions of such a patent rights clause in a subcontract hereunder may, upon mutual consent of the Contractor and the subcontractor (or by direction of the Contracting Officer) be furnished to the Contractor for transmission to the Contracting Officer.

PATENT RIGHTS—CLAUSE 14

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means any invention, improvement, or discovery (whether or not patentable) conceived or first actually reduced to practice in the course of, in the performance of the work of, or under the terms of this contract; *provided* that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts set forth in (b) below) who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions, or whose employment agreement with the Contractor provides for his assignment of patents to the Contractor.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(b) (1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition of any article or material, and in the use of any method; with the right in the Government to sublicense others to practice each Subject Invention in the manufacture, use and sale of any article or in the use of any method for the purpose of providing supplies or services to the general public within the United States, its territories and possessions in the field of Air Traffic Control, if and whenever the Federal Aviation Agency shall have first found as a fact, after appropriate procedure, that the grant of such sublicense is required in the public interest cognizable by any agency of the Government.

(2) With respect to:

(i) any Subject Invention made by other than Technical Personnel;

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the work specified in (a)(i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in

(b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, and to convey foreign rights as provided in (e) below; shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to others (except those whose rights derive from the Contractor or its technical personnel) solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim report at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c)(i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decides not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specifies that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notifies the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's

right, title, and interest aforesaid, and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the rights of the Contractor in foreign applications as provided in (e) below, and subject further to the reservation of a non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) The Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention;

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above; and

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights and any sublicensing rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall, as between the parties hereto, have the exclusive right to file applications on Subject Inventions, subject to the Government's right under (f), in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer.

The Contractor shall, upon written request of the Contracting Officer convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a non-exclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sublicenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) Whenever:

1. the Contractor (including those deriving their rights from the Contractor) has obtained a foreign patent to a subject invention;

2. the grant of a license under that patent to a foreign government, or a manufacturer approved by that government, is required by the public interest (as found as a fact by FAA); and

3. the Contractor itself or through its licensees is not making equipment incorporating the subject invention available in adequate quality, in sufficient quantity, at reasonable price, or otherwise as required in the public interest (as found as a fact by FAA);

the United States Government shall have the right to require the Contractor to grant such non-exclusive, non-transferable licenses, and upon such terms, as may be required in the public interest. Public interest in this paragraph shall mean the public interest or policy of the United States as evidenced by a treaty, convention, or international executive agreement to which the United States is a party, or by a United States statute or regulation. In establishing the terms under which any license shall be issued hereunder, the Government shall, to the extent consistent with public interest (as found as a fact by FAA), provide for the recovery by the Contractor of a reasonable royalty at rates which shall not exceed those charged to its own licensees.

(g) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (c)(i) above shown to be due in accordance with any interim report delivered under (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

- (i) the final report required by (c)(iii) above;
- (ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above, or in accordance with such final reports, or are otherwise known to be unreported; and
- (iii) the information as to any subcontractor required by (h) below.

The maximum amount which may be withheld under this paragraph (g) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (g) when the amount specified by this paragraph (g) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (g) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(h) The Contractor shall exert all reasonable effort in negotiating for the inclusion of a patent rights clause containing all the provisions

of this Patent Rights clause except provision (g) in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept such a patent rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer or unless there has been a waiver of the requirement as hereinafter provided. The Contractor, if unable to comply with the requirement that such a patent rights clause be included in a subcontract after exerting all reasonable effort to do so, may submit to the Contracting Officer a written request for waiver or modification of such requirement. If, within thirty-five (35) days after the receipt of such request, the Contracting Officer does not mail or otherwise furnish the Contractor written denial of such request or notification that the Government requests the Contractor's cooperation with the Government, which the Contractor agrees to provide, in negotiating with the subcontractor for the acceptance of a suitable patent rights clause, the requirement shall be deemed to have been waived by the Contracting Officer as to all patent rights provisions with respect to Subject Inventions, except such provisions, if any, relating to the production or utilization of special nuclear material or atomic energy. Such request shall specifically state that the Contractor has used all reasonable effort to comply with said requirement and shall cite the waiver provision hereinabove set forth. The Contractor is not required when negotiating with a subcontractor, to obtain in behalf of the Government any rights in Subject Inventions other than as provided herein. However, the Contractor is not precluded from separately negotiating with a subcontractor for rights in Subject Inventions for the Contractor's own behalf, but any costs so incurred shall not be considered as an allowable charge or cost under this contract. Reports, instruments, and other information required to be furnished by a subcontractor to the Contracting Officer under the provisions of such a patent rights clause in a subcontract hereunder may, upon mutual consent of the Contractor and the subcontractor (or by direction of the Contracting Officer) be furnished to the Contractor for transmission to the Contracting Officer.

PATENT RIGHTS—CLAUSE 15

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means any invention, improvement, or discovery whether or not patentable, conceived or first actually reduced to practice either—

(A) in the performance of the experimental, developmental, or research work called for or required under this contract; or

(B) in the performance of any experimental, developmental, or research work relating to the subject matter of this contract which was done upon an understanding in writing that a contract would be awarded; *provided* that the term "Subject Invention" shall not include any

invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts set forth in (g), (h), and (i) below), who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(b)(1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and to cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition of any article or material, and in the use of any method; with the right in the Government to sublicense others to practice each Subject Invention in the manufacture, use, and sale of any article or in the use of any method for the purpose of providing supplies or services to the general public of the United States and its territories in the field of air traffic controls.

(2) With respect to:

(i) any Subject Invention made by Technical Personnel;

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the experimental, developmental, or research work specified in (a)(i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, and to convey foreign rights as provided in (e) below, shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to others solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c)(i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decided not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specified that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notified the Contracting Officer to the contrary), the Contractor shall: (A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, date of any contemplated publication by the Contractor, stating the date and identity of such publication (or contemplated publication); and

(B) convey to the Government the Contractor's entire right, title, and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's right, title, and interest aforesaid; and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the rights of the Contractor in foreign applications as provided in (e) below; and subject further to the reservation of a non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) the Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention; (iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title, and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above;

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall have the exclusive rights to file applications on Subject Inventions in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer.

The Contractor shall, upon written request of the Contracting Officer, convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a nonexclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sub-licenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

(i) the final report required by (c)(iii) above;

(ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above or in accordance with such final reports or are otherwise known to be unreported; and

(iii) the information as to any subcontractor required by (h) below.

The maximum amount which may be withheld under this paragraph (f) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of this Patent Rights clause in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept the Patent Rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer, and upon obtaining such authorization, shall cooperate with the Government in the negotiation with such subcontractor of an acceptable patent rights clause; *provided*, however, that the Contractor shall in any event require the subcontractor to grant to the Government patent rights under Subject Inventions of no less scope and on no less favorable terms than those which the Contractor has under such subcontracts, except that in no event shall be subcontractor be required to grant to the Government patent rights in excess of those herein agreed to be granted to the Government by the Contractor.

(h) The Contractor shall, at the earliest practicable date, notify the Contracting Officer in writing of any subcontract containing a patent rights clause, furnish the Contracting Officer a copy of such clause, and notify the Contracting Officer when such subcontract is completed. It is understood that with respect to such subcontract clause, the Government is a third party beneficiary; and the Contractor hereby assigns to the Government all the rights that the Contractor would have to enforce the subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Contractor shall not be obligated to enforce the agreements of any subcontractor hereunder relating to Subject Inventions.

(i) When the Contractor shows that it has been delayed in the performance of this contract by reason of its inability to obtain in accordance with (g) above a suitable patent rights clause from a qualified subcontractor for any item or service required under this contract for which the Contractor itself does not have available facilities or qualified personnel, the Contractor's delivery dates shall be extended for a period of time equal to the duration of such delay; and, upon request of the Contractor, the Contracting Officer shall determine to what extent, if any, an additional extension of the delivery dates and increase in contract prices based upon additional costs incurred by such delay are proper under the circumstances; and the contract shall be modified accordingly. If the Contractor, after exerting all reasonable effort, is unable to obtain a qualified subcontractor as set forth above, the Contractor may submit to the Contracting Officer a written request for waiver or modification of the requirement that a suitable patent rights clause be included in the subcontract.

Such request shall specifically state that the Contractor has used all reasonable effort to obtain such qualified subcontractor, and shall cite the waiver or termination provision hereinafter set forth. If, within thirty-five (35) days after the date of receipt of such request for a waiver or modification of said requirement, the Contracting Officer shall fail to deny in writing such request, the requirement shall be deemed to have been waived by the Government. If within such period the Contractor shall receive a written denial of such request by the Contracting Officer, this contract shall thereupon automatically terminate and the rights and obligations of the parties

shall be governed by the provisions of the clause of this contract providing for termination for the convenience of the Government.

PATENT RIGHTS—CLAUSE 16

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means any invention, improvement or discovery (whether or not patentable) conceived or first actually reduced to practice either—

(A) in the performance of the experimental, developmental, or research work called for or required under this contract; or

(B) in the performance of any experimental, developmental, or research work relating to the subject matter of this contract which was done upon an understanding in writing that a contract would be awarded;

provided, that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts are set forth in (g), (h), and (i) below) who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(b)(1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition according to law, of any article or material, and in the use of any method. No license granted herein shall convey any right to the Government to manufacture, have manufactured, or use any Subject Invention for the purpose of providing services or supplies to the general public in competition with the Contractor or the Contractor's commercial licensees in the licensed fields.

(2) With respect to:

- (i) any Subject Invention made by other than Technical Personnel;

- (ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the experimental, developmental, or research work specified in (a)(i) above; and

- (iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, and to convey foreign rights as provided in (e) below, shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to

others solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports, at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c)(i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; *however*, if the Contractor, after having specified that such an application would be filed, decides not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale;

(ii) if the Contractor specifies that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notifies the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date, and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title, and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's right, title, and interest aforesaid, and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the right of the Contractor specified in (e) below to file foreign applications, and subject further to the reservation of a non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if

any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) the Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention;

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title, and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above; and

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall have the exclusive rights to file applications on Subject Inventions in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer. The Contractor shall, upon written request of the Contracting Officer, convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a non-exclusive and royalty-free license to the Contractor, together with the right of the Contractor to grant sub-licenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (c)(i) above, shown to be due in accordance with any interim report delivered under (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either one percent (1%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either one percent (1%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such

reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

- (i) the final report required by (c)(iii) above;
- (ii) written disclosures for all Subject Inventions required by (c)(i) above, which are shown to be due in accordance with interim reports delivered under (c)(ii) above, or in accordance with such final reports or are otherwise known to be unreported; and
- (iii) the information as to any subcontractor required by (h) below.

The maximum amount which may be withheld under this paragraph (f) shall not exceed one percent (1%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of this Patent Rights clause in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept the Patent Rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer, and upon obtaining such authorization, shall cooperate with the Government in the negotiation with such subcontractor of an acceptable patent rights clause; *provided, however*, that the Contractor shall in any event require the subcontractor to grant to the Government patent rights under Subject Inventions of no less scope and on no less favorable terms than those which the Contractor has under such subcontracts, except that in no event shall the subcontractor be required to grant to the Government patent rights in excess of those herein agreed to be granted to the Government by the Contractor.

(h) The Contractor shall, at the earliest practicable date, notify the Contracting Officer in writing of any subcontract containing a patent rights clause, furnish the Contracting Officer a copy of such clause, and notify the Contracting Officer when such subcontract is completed. It is understood that with respect to such subcontract clause, the Government is a third party beneficiary; and the Contractor hereby assigns to the Government all the rights that the Contractor would have to enforce the subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Contractor shall not be obligated to enforce the agreements of any subcontractor hereunder relating to Subject Inventions.

(i) When the Contractor shows that it has been delayed in the performance of this contract by reason of its inability to obtain in accordance with (g) above, a suitable patent rights clause from a qualified subcontractor for any item or service required under this contract for which the Contractor itself does not have available facilities or qualified personnel, the Contractor's delivery dates shall

be extended for a period of time equal to the duration of such delay; and, upon request of the Contractor, the Contracting Officer shall determine to what extent, if any, an additional extension of the delivery dates and in increase in contract prices based upon additional costs incurred by such delay are proper under the circumstances; and the contract shall be modified accordingly.

If the Contractor, after exerting all reasonable effort, is unable to obtain a qualified subcontractor as set forth above, the Contractor may submit to the Contracting Officer a written request for a waiver or modification of the requirement that a suitable patent rights clause be included in the subcontract. Such request shall specifically state that the Contractor has used all reasonable effort to obtain such qualified subcontractor, and shall cite the waiver or termination provision hereinafter set forth. If, within thirty-five (35) days after the date of receipt of such request for a waiver or modification of said requirement, the Contracting Officer shall fail to deny in writing such request, the requirement shall be deemed to have been waived by the Government. If within such period the Contractor shall receive a written denial of such request by the Contracting Officer, this contract shall thereupon automatically terminate and the rights and obligations of the parties shall be governed by the provisions of the clause of this contract providing for termination for the convenience of the Government.

PATENT RIGHTS—CLAUSE 17

(a) As used in this clause, the following terms shall have the meaning as set forth below:

(i) The term "Subject Invention" means any invention, improvement or discovery (whether or not patentable) conceived or first actually reduced to practice either

(A) In the performance of the experimental, developmental, or research work called for or required under this contract; or

(B) In the performance of any experimental, developmental, or research work relating to the subject matter of this contract which was done upon an understanding in writing that a contract would be awarded;

provided that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts are set forth in (g), (h) and (z) below) who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions.

(iii) The terms "subcontract" and "subcontractor" means any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(b)(1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, nontransferable, and

royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition according to law, of any article or material and in the use of any method. No license granted herein shall convey any right to the Government to manufacture, have manufactured, or use any Subject Invention for the purpose of providing services or supplies to the general public in competition with the Contractor or the Contractor's commercial licensees in the licensed fields.

(2) With respect to:

(i) any Subject Invention made by other than Technical Personnel:

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the experimental, developmental, or research work specified in (a)(i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, and to convey foreign rights as provided in (e) below, shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to others solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports, at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c)(i) above, the Contractor shall do the following:

(i) If the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decides not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specifies that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notifies the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title, and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's right, title, and interest aforesaid, and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the right of the Contractor specified in (e) below to file foreign applications, and subject further to the reservation of a non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) the Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention:

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above; and

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall have the exclusive rights to file applications on Subject Inventions in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer. The Contractor shall, upon written request of the Contracting Officer, convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a non-exclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sublicenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (c)(i) above shown to be due in accordance with any interim report delivered under (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

- (i) the final report required by (c)(iii) above;
- (ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above or in accordance with such final reports or are otherwise known to be unreported; and
- (iii) the information as to any subcontractor required by (h) below. The maximum amount which may be withheld under this paragraph (f) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of this Patent Rights clause in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept the Patent Rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer, and upon obtaining such authorization, shall cooperate with the Government in the negotiation with such subcontractor of an acceptable patent rights clause; *provided*, however, that the Contractor shall in any event require the subcontractor to grant to the Government patent rights under Sub-

ject Invention of no less scope and no less favorable terms than those which the Contractor has under such subcontracts, except that in no event shall the subcontractor be required to grant to the Government patent rights in excess of those herein agreed to be granted to the Government by the Contractor.

(h) The Contractor shall, at the earliest practicable date, notify the Contracting Officer in writing of any subcontract containing a patent rights clause, furnish the Contracting Officer a copy of such clause, and notify the Contracting Officer when such subcontract is completed. It is understood that with respect to such subcontract clause, the Government is a third party beneficiary; and the Contractor hereby assigns to the Government all the rights that the Contractor would have to enforce the subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Contractor shall not be obligated to enforce the agreements of any subcontractor hereunder relating to Subject Inventions.

(i) When the Contractor shows that it has been delayed in the performance of this contract by reason of its inability to obtain in accordance with (g) above a suitable patent rights clause from a qualified subcontractor for any item or service required under this contract for which the Contractor itself does not have available facilities or qualified personnel, the Contractor's delivery dates shall be extended for a period of time equal to the duration of such delay; and, upon request of the Contractor, the Contracting Officer shall determine to what extent, if any, an additional extension of the delivery dates and an increase in contract prices based upon additional costs incurred by such delay are proper under the circumstances; and the contract shall be modified accordingly. If the Contractor, after exerting all reasonable effort, is unable to obtain a qualified subcontractor as set forth above, the Contractor may submit to the Contracting Officer a written request for waiver or modification of the requirement that a suitable patent rights clause be included in the subcontract.

Such request shall specifically state that the Contractor has used all reasonable effort to obtain such qualified subcontractor, and shall cite the waiver or termination provision hereinafter set forth. If, within thirty-five (35) days after the date of receipt of such request for a waiver or modification of said requirement, the Contracting Officer shall fail to deny in writing such request, the requirement shall be deemed to have been waived by the Government. If within such period the Contractor shall receive a written denial of such request by the Contracting Officer, this contract shall thereupon automatically terminate and the rights and obligations of the parties shall be governed by the provisions of the clause of this contract providing for termination for the convenience of the Government.

PATENT RIGHTS—CLAUSE 18

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means by invention, improvement, or discovery whether or not patentable) conceived or first actually reduced to practice either—

(A) in the performance of the experimental, developmental, or research work called for or required under this contract; or

(B) in the performance of any experimental, developmental, or research work relating to the subject matter of this contract which was done upon an understanding in writing that a contract would be awarded;

provided that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts set forth in (g), (h), and (i) below), who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(b)(1) The Contractor agrees to and does hereby grant to the Government any irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition according to law, of any article or material, and in the use of any method. No license granted herein shall convey any right to the Government to manufacture, have manufactured, or use any Subject Invention for the purpose of providing services or supplies to the general public in competition with the Contractor or the Contractor's commercial licensees in the licensed fields.

(2) With respect to:

(i) any Subject Invention made by other than Technical Personnel;

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the experimental, developmental, or research work specified in (a)(i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to others solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c)(i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decided not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specified that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notified the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title, and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Contractor's right, title, and interest aforesaid, and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the right of the Contractor specified in (e) below to file foreign applications, and subject further to the reservation of a non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) the Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention;

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so

notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title, and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above;

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving rights from the Contractor, shall have the exclusive rights to file applications on Subject Inventions in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer.

The Contractor shall, upon written request of the Contracting Officer, convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a nonexclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sub-licenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (c)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (e)(i) above, shown to be due in accordance with any interim report delivered under (c)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

(i) the final report required by (c)(iii) above;

(ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above or in accordance with such final reports or are otherwise known to be unreported; and

(iii) the information as to any subcontractor required by (h) below.

The maximum amount which may be withheld under this paragraph (f) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified

by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of this Patent Rights clause in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept the Patent Rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer, and upon obtaining such authorization, shall cooperate with the Government in the negotiation with such subcontractor of an acceptable patent rights clause; *provided*, however, that the Contractor shall in any event require the subcontractor to grant to the Government patent rights under Subject Inventions of no less scope and on no less favorable terms than those which the Contractor has under such subcontracts, except that in no event shall the subcontractor be required to grant to the Government patent rights in excess of those herein agreed to be granted to the Government by the Contractor.

(h) The Contractor shall, at the earliest practicable date, notify the Contracting Officer in writing of any subcontract containing a patent rights clause, furnish the Contracting Officer a copy of such clause and notify the Contracting Officer when such subcontract is completed. It is understood that with respect to such subcontract clause, the Government is a third party beneficiary; and the Contractor hereby assigns to the Government all the rights that the Contractor would have to enforce the subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Contractor shall not be obligated to enforce the agreements of any subcontractor hereunder relating to Subject Inventions.

(i) When the Contractor shows that it has been delayed in the performance of this contract by reason of its inability to obtain in accordance with (g) above a suitable patent rights clause from a qualified subcontractor for any item or service required under this contract for which the Contractor itself does not have available facilities or qualified personnel, the Contractor's delivery dates shall be extended for a period of time equal to the duration of such delay; and, upon request of the Contractor, the Contracting Officer shall determine to what extent, if any, an additional extension of the delivery dates and increase in contract prices based upon additional costs incurred by such delay are proper under the circumstances; and the contract shall be modified accordingly. If the Contractor, after exerting all reasonable effort, is unable to obtain a qualified subcontractor as set forth above, the Contractor may submit to the Contracting Officer a written request for waiver or modification of the requirement that a suitable patent rights clause be included in the subcontract.

Such request shall specifically state that the Contractor has used all reasonable effort to obtain such qualified subcontractor, and shall cite the waiver or termination provision hereinafter set forth. If, within thirty-five (35) days after the date of receipt of such request for a

waiver or modification of said requirement, the Contracting Officer shall fail to deny in writing such request, the requirement shall be deemed to have been waived by the Government. If within such period the Contractor shall receive a written denial of such request by the Contracting Officer, this contract shall thereupon automatically terminate and the rights and obligations of the parties shall be governed by the provisions of the clause of this contract providing for termination for the convenience of the Government.

PATENT RIGHTS—CLAUSE 19

(a) As used in this clause, the following terms shall have the meanings set forth below:

(i) The term "Subject Invention" means any invention, improvement, or discovery (whether or not patentable) conceived for or first actually reduced to practice either—

(A) in the performance of the experimental, developmental, or research work called for or required under this contract; or

(B) in the performance of any experimental, developmental, or research work relating to the subject matter of this contract which was done upon an understanding in writing that a contract would be awarded;

provided that the term "Subject Invention" shall not include any invention which is specifically identified and listed in the Schedule for the purpose of excluding it from the license granted by this clause.

(ii) The term "Technical Personnel" means any person employed by or working under contract with the Contractor (other than a subcontractor whose responsibilities with respect to rights accruing to the Government in inventions arising under subcontracts set forth in (g), (h), and (i) below), who, by reason of the nature of his duties in connection with the performance of this contract, would reasonably be expected to make inventions.

(iii) The terms "subcontract" and "subcontractor" mean any subcontract or subcontractor of the Contractor, and any lower-tier subcontract or subcontractor under this contract.

(b)(1) The Contractor agrees to and does hereby grant to the Government any irrevocable, nonexclusive, nontransferable, and royalty-free license to practice, and cause to be practiced by or for the United States Government, throughout the world, each Subject Invention in the manufacture, use and disposition according to law, of any article or material, and in the use of any method. No license granted herein shall convey any right to the Government to manufacture, have manufactured, or use any Subject Invention for the purpose of providing services or supplies to the general public in competition with the Contractor or the Contractor's commercial licensees in the licensed fields.

(2) With respect to:

(i) any Subject Invention made by other than Technical Personnel;

(ii) any Subject Invention conceived prior to, but first actually reduced to practice in the course of, any of the experimental, developmental, or research work specified in (a)(i) above; and

(iii) the practice of any Subject Invention in foreign countries; the obligation of the Contractor to grant a license as provided in (b)(1) above, to convey title as provided in (d)(ii)(B) or (d)(iv) below, and to convey foreign rights as provided in (e) below, shall be limited to the extent of the Contractor's right to grant the same without incurring any obligation to pay royalties or other compensation to others solely on account of said grant. Nothing contained in this Patent Rights clause shall be deemed to grant any license under any invention other than a Subject Invention.

(c) The Contractor shall furnish to the Contracting Officer the following information and reports concerning Subject Inventions which reasonably appear to be patentable:

(i) a written disclosure promptly after conception or first actual reduction to practice of each such Invention together with a written statement specifying whether or not a United States patent application claiming the Invention has been or will be filed by or on behalf of the Contractor;

(ii) interim reports at least every twelve months, commencing with the date of this contract, each listing all such Inventions conceived or first actually reduced to practice more than three months prior to the date of the report, and not listed on a prior interim report, or certifying that there are no such unreported Inventions; and

(iii) prior to final settlement of this contract, a final report listing all such Inventions including all those previously listed in interim reports.

(d) In connection with each Subject Invention referred to in (c)(i) above, the Contractor shall do the following:

(i) if the Contractor specifies that a United States patent application claiming such Invention will be filed, the Contractor shall file or cause to be filed such application in due form and time; however, if the Contractor, after having specified that such an application would be filed, decided not to file or cause to be filed said application, the Contractor shall so notify the Contracting Officer at the earliest practicable date and in any event not later than eight months after first publication, public use or sale.

(ii) if the Contractor specified that a United States patent application claiming such Invention has not been filed and will not be filed (or having specified that such an application will be filed thereafter notified the Contracting Officer to the contrary), the Contractor shall:

(A) inform the Contracting Officer in writing at the earliest practicable date of any publication of such Invention made by or known to the Contractor or, where applicable, of any contemplated publication by the Contractor, stating the date and identity of such publication or contemplated publication; and

(B) convey to the Government the Contractor's entire right, title, and interest in such Invention by delivering to the Contracting Officer upon written request such duly executed instruments (prepared by the Government) of assignment and application, and such other papers as are deemed necessary to vest in the Government the Con-

tractor's right, title, and interest aforesaid, and the right to apply for and prosecute patent applications covering such Invention throughout the world, subject, however, to the right of the Contractor specified in (e) below to file foreign applications, and subject further to the reservation of a non-exclusive and royalty-free license to the Contractor (and to its existing and future associated and affiliated companies, if any, within the corporate structure of which the Contractor is a part) which license shall be assignable to the successor of that part of the Contractor's business to which such Invention pertains;

(iii) the Contractor shall furnish promptly to the Contracting Officer on request an irrevocable power of attorney to inspect and make copies of each United States patent application filed by or on behalf of the Contractor covering any such Invention;

(iv) in the event the Contractor, or those other than the Government deriving rights from the Contractor, elects not to continue prosecution of any such United States patent application filed by or on behalf of the Contractor, the Contractor shall so notify the Contracting Officer not less than sixty days before the expiration of the response period and, upon written request, deliver to the Contracting Officer such duly executed instruments (prepared by the Government) as are deemed necessary to vest in the Government the Contractor's entire right, title, and interest in such Invention and the application, subject to the reservation as specified in (d)(ii) above;

(v) the Contractor shall deliver to the Contracting Officer duly executed instruments fully confirmatory of any license rights herein agreed to be granted to the Government.

(e) The Contractor, or those other than the Government deriving the rights from the Contractor, shall have the exclusive rights to file applications on Subject Inventions in each foreign country within:

(i) nine months from the date a corresponding United States application is filed;

(ii) six months from the date permission is granted to file foreign applications where such filing had been prohibited for security reasons; or

(iii) such longer period as may be approved by the Contracting Officer.

The Contractor shall, upon written request of the Contracting Officer, convey to the Government the Contractor's entire right, title, and interest in each Subject Invention in each foreign country in which an application has not been filed within the time above specified, subject to the reservation of a nonexclusive and royalty-free license to the Contractor together with the right of the Contractor to grant sublicenses, which license and right shall be assignable to the successor of that part of the Contractor's business to which the Subject Invention pertains.

(f) If the Contractor fails to deliver to the Contracting Officer the interim reports required by (e)(ii) above, or fails to furnish the written disclosures for all Subject Inventions required by (e)(i) above, shown to be due in accordance with any interim report delivered under (e)(ii) or otherwise known to be unreported, there shall be withheld from payment until the Contractor shall have corrected such failures

either ten percent (10%) of the amount of this contract, as from time to time amended, or five thousand dollars (\$5,000), whichever is less. After payment of eighty percent (80%) of the amount of this contract, as from time to time amended, payment shall be withheld until a reserve of either ten percent (10%) of such amount, or five thousand dollars (\$5,000), whichever is less, shall have been set aside, such reserve or balance thereof to be retained until the Contractor shall have furnished to the Contracting Officer:

- (i) the final report required by (c)(iii) above;
- (ii) written disclosures for all Subject Inventions required by (c)(i) above which are shown to be due in accordance with interim reports delivered under (c)(ii) above or in accordance with such final reports or are otherwise known to be unreported; and
- (iii) the information as to any subcontractor required by (h) below.

The maximum amount which may be withheld under this paragraph (f) shall not exceed ten percent (10%) of the amount of this contract or five thousand dollars (\$5,000), whichever is less, and no amount shall be withheld under this paragraph (f) when the amount specified by this paragraph (f) is being withheld under other provisions of this contract. The withholding of any amount or subsequent payment thereof to the Contractor shall not be construed as a waiver of any rights accruing to the Government under this contract. This paragraph (f) shall not be construed as requiring the Contractor to withhold any amounts from a subcontractor to enforce compliance with the patent provisions of a subcontract.

(g) The Contractor shall exert all reasonable effort in negotiating for the inclusion of this Patent Rights clause in any subcontract hereunder of three thousand dollars (\$3,000) or more having experimental, developmental, or research work as one of its purposes. In the event of refusal by a subcontractor to accept the Patent Rights clause, the Contractor shall not proceed with the subcontract without written authorization of the Contracting Officer, and upon obtaining such authorization, shall cooperate with the Government in the negotiation with such subcontractor of an acceptable patent rights clause; *provided*, however, that the Contractor shall in any event require the subcontractor to grant to the Government patent rights under Subject Inventions of no less scope and on no less favorable terms than those which the Contractor has under such subcontracts, except that in no event shall the subcontractor be required to grant to the Government patent rights in excess of those herein agreed to be granted to the Government by the Contractor.

(h) The Contractor shall, at the earliest practicable date, notify the Contracting Officer in writing of any subcontract containing a patent rights clause, furnish the Contracting Officer a copy of such clause, and notify the Contracting Officer when such subcontract is completed. It is understood that with respect to such subcontract clause, the Government is a third party beneficiary; and the Contractor hereby assigns to the Government all the rights that the Contractor would have to enforce the subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Contractor shall not be obligated to enforce the agreements of any subcontractor hereunder relating to Subject Inventions.

(2) When the Contractor shows that it has been delayed in the performance of this contract by reason of its inability to obtain in accordance with (g) above a suitable patent rights clause from a qualified subcontractor for any item or service required under this contract for which the Contractor itself does not have available facilities or qualified personnel, the Contractor's delivery dates shall be extended for a period of time equal to the duration of such delay; and, upon request of the Contractor, the Contracting Officer shall determine to what extent, if any, an additional extension of the delivery dates and increase in contract prices based upon additional costs incurred by such delay are proper under the circumstances; and the contract shall be modified accordingly. If the Contractor, after exerting all reasonable effort, is unable to obtain a qualified subcontractor as set forth above, the Contractor may submit to the Contracting Officer a written request for waiver or modification of the requirement that a suitable patent rights clause be included in the subcontract.

Such request shall specifically state that the Contractor has used all reasonable effort to obtain such qualified subcontractor, and shall cite the waiver or termination provision hereinafter set forth. If, within thirty-five (35) days after the date of receipt of such request for a waiver or modification of said requirement, the Contracting Officer shall fail to deny in writing such request, the requirement shall be deemed to have been waived by the Government. If within such period the Contractor shall receive a written denial of such request by the Contracting Officer, this contract shall thereupon automatically terminate and the rights and obligations of the parties shall be governed by the provisions of the clause of this contract providing for termination for the convenience of the Government.

CLAUSE 20. PATENT CONDITIONS (APPLICABLE TO DEVELOPMENT CONTRACTS)

In consideration of this contract it is hereby agreed that, if in the course of the development of the article herein contracted for, there shall be incorporated herein any new inventions and/or discoveries made by the Contractor or any of its employees, as a part of said development, the Contractor shall furnish the Government a complete list of all such inventions and/or discoveries and shall designate on such list those inventions and/or discoveries on which applications for patents will be made by or on behalf of the Contractor. The Contractor shall file and duly prosecute, or cause to be filed or duly prosecuted applications for United States Letters Patent covering the inventions and/or discoveries so designated, and the Government shall have, solely for Governmental purposes and without any consideration in addition to that herein provided for, a non-inclusive and irrevocable license to make, use and/or have made for its use any and all such inventions and/or discoveries which result in United States Letters Patent, in devices of the same or substantially the same character and for the same purpose as the devices furnished under this contract, anywhere and at any time the Government may see fit, and to sell devices embodying said inventions and/or discoveries, and devices of the same or substantially the same character as above recited, as provided for by law regarding the sale of surplus or con-

demned public property. The Contractor hereby agrees that the Government shall have further an irrevocable option to file and prosecute applications for United States Letters Patent in the name of the inventor (retaining only a nonexclusive and irrevocable license to the Government), on such new inventions and/or discoveries as may not be designated by the Contractor as those on which he will file and prosecute applications for United States Letters Patent, and the Government hereby reserves the right to file and prosecute all such applications for United States Letters Patent.

On the new inventions and/or new discoveries on which the Government elects to file applications for United States Letters Patent, the Contractor agrees to grant the Government full power of substitution and revocation, and power to make alterations and amendments in and to such applications, to receive the patents, and to transact all business in the Patents Office connected therewith, and to prosecute, conduct and make all adjustments and settlements of any interference and other actions or proceedings in which such applications may become involved.

The Contractor further agrees to furnish and deliver to the Government any and all papers, documents, affidavits and/or other instruments duly executed that may be required by the Administrator of the Civil Aeronautics Administration in the preparation, prosecution or conduct of the application for United States Letters Patent the Government elects to prosecute, or in the adjustment or settlement of any interference or other actions or proceedings in which such applications may become involved and further to aid the Government in protecting the inventions and/or discoveries as may be requested by the Administrator of the Civil Aeronautics Administration.

Process patents, shop practices and manufacturing methods are not to be considered as included within the terms of this agreement, unless specifically mentioned and designated as joint developments, when the Government through financial or other cooperative effort has contributed to the result obtained.

The Contractor covenants that he has not entered into and will not enter into any arrangements to evade the intent and purpose of the provisions of the contract pertaining to patentable subject matter.