NEGOTIATED CONTRACT

DEPARTMENT	EFFECTIVE DATE	SHEET NO.	NO. OF SHEETS
ARMY	31 MAR 1964	1	7

R&D NO. OR OTHER PURCHASE AUTH.	NEGOTIATED PURSUANT TO	DISCOUNT TERMS	CONTRACT NO.
CRDL 157-ME-4	10 U.S.C. 2304 (a) (5)		RFP 88 * DA18-035-AMC-126(A)

ISSUED BY
CONTRACTING OFFICER
Edgewood Arsenal
Edgewood Arsenal, Maryland

MAIL INVOICES TO
Contracting Officer COG
Edgewood Arsenal
Edgewood Arsenal, Maryland

RCC2.950308.067

CONTRACTOR (Name and Address)
The Trustees of the University
of Pennsylvania
3400 Walnut Street
Philadelphia 4, Pennsylvania

PAYMENT WILL BE MADE BY
FINANCE AND ACCOUNTING OFFICER
BUILDING NO. 73
Edgewood Arsenal, Maryland

SHIP TO (Consignee and Address)
See Schedule

DELIVERY F.O.B. ☒ DESTINATION ☐ OTHER (See Schedule)

DELIVERY DATE(S)
See Schedule

ACCOUNTING AND APPROPRIATION DATA

THIS CONTRACT HAS BEEN FUNDED ONLY IN THE AMOUNT OF $101,923.00. ADDITIONAL FUNDING WILL BE IN ACCORDANCE WITH AND SUBJECT TO THE LIMITATIONS SET OUT IN THE CONTRACT. 21X2040 465-[illegible] P5522-25 XO 5-374-20 CC 553 Project 1C522301A079-01 S18-035

CONTRACT EXECUTED

CONTRACTOR REPRESENTS

1. That it ☐ IS, ☐ IS NOT, a small business concern. Generally, a small business concern for the purpose of Government procurement is a concern that (*1*) is not dominant in its field of operation and, with its affiliates, employs fewer than 500 employees, or (*2*) is certified as a small business concern by the Small Business Administration. (*See Code of Federal Regulations, Title 13, Part 103, as amended, which contains the detailed definition and related procedures.*) If Contractor is a small business concern and is not the manufacturer of the supplies covered by this contract, it also represents that all supplies to be furnished hereunder ☐ WILL, ☐ WILL NOT, be manufactured or produced by a small business concern in the United States, its Territories, its Possessions, or The Commonwealth of Puerto Rico.
2. That it is a ☐ REGULAR DEALER IN, ☐ MANUFACTURER OF, the supplies covered by this contract.
3. (*a*) That it ☐ HAS, ☐ HAS NOT, employed or retained any company or person (*other than a full-time bona fide employee working solely for the contractor*) to solicit or secure this contract, and (*b*) that it ☐ HAS, ☐ HAS NOT, paid or agreed to pay any company or person (*other than a full-time bona fide employee working solely for the contractor*) any fee, commission, percentage or brokerage fee, contingent upon or resulting from the award of this contract; and agrees to furnish information relating to (*a*) and (*b*) above as requested by the Contracting Officer. (*For interpretation of the representation, including the term "bona fide employee", see Code of Federal Regulations, Title 44, Part 150.*)
4. That it operates as ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ CORPORATION incorporated in the State of _____

The Contractor agrees to furnish and deliver all the supplies and perform all the services set forth in the attached Schedule, for the consideration stated therein. The rights and obligations of the parties to this contract shall be subject to and governed by the Schedule and the General Provisions. To the extent of any inconsistency between the Schedule or the General Provisions and any specifications or provisions which are made a part of this contract, by reference or otherwise, the Schedule and the General Provisions shall control. To the extent of any inconsistency between the Schedule and the General Provisions, the Schedule shall control.

The total amount of this contract is $ 386,500.00 (See Accounting & Appropriation Data Above)

_____ NAME OF CONTRACTOR	UNITED STATES OF AMERICA
BY _____ SIGNATURE DATE	BY _____ SIGNATURE OF CONTRACTING OFFICER DATE 22 Apr 64
_____ TYPED NAME	L. A. WALKER TYPED NAME OF CONTRACTING OFFICER
Title _____	

DD FORM 1 DEC 68 1261 REPLACES DD FORMS 351, 351-1 AND 351-2, WHICH ARE OBSOLETE AFTER 1 JUL 69.

MRICD
Edgewood Area Records Holding Area
Edgewood Arsenal, Maryland
Accession # 3-81
Box # 11 of 55
Folder name: 1301-07c University of Pennsylvania
1963 - 1964 Negotiations

Contract No. DA18-035-AMC-126(A)

TITLE: Threshold Doses in Humans

DO-A 6, Certified for National Defense Use Under DMS Reg. 1

SCHEDULE

I. Statement of Work

A. Services to be Performed:

The contractor shall furnish all necessary personnel, facilities, materials, equipment and supplies (except such Government-furnished property as is provided for under this contract), and shall exert its best efforts during the performance to determine the threshold response dose of adult human subjects to compounds designated by the Government and agreed to by the Contractor, and administered by any route required by the Government. These compounds shall be in the category of incapacitating agents, irritants, or other classes of chemicals designated by the Government.

1. The volunteer subjects shall number up to twenty (20) for each compound tested. (Volunteers must be at least twenty-one (21) years of age.)

2. Each shall have a thorough physical examination, to include chest x-ray, electrocardiogram, complete blood count, blood non-protein nitrogen determination, liver function studies as characterized by determination of bilirubin, cephalin, flocculation, thymol turbidity, SGPT and SGOT, EEG, psychiatric and psychological examination to rule out pre-existing disease.

3. Subjects shall be divided into two groups and shall receive, in double blind fashion, either active compound or inert placebo. The estimated initial dose shall be in the range of 1 to 20 ugm/kg of active substance. The dose shall be increased by suitable increments until the minimal response dose (MED_{50}) has been determined.

4. Dose response studies on any compound will be consistent with criteria established and utilized on present approved studies conducted at Edgewood Arsenal.

5. Pre-drug determinations shall provide baseline data to indicate the amount of variation between subjects and in individuals (inter- and Intrasubject variation). These data shall be preliminary to the data relative to onset of initial change; magnitude and direction of change and duration of change. Subjects shall be studied until the maximum change has been reached. Experimental and control subjects shall be treated in the same manner.

6. These data, described above as baseline and experimental, shall be compared, using standard statistical procedures. Dose-response relationships lending themselves to the sensitive trend tests based on analysis of variance procedures will be used as applicable.

7. Technical advice and aid will be furnished the Contractor by the Directorate of Medical Research, U.S. Army Chemical Research and Development Laboratories, Edgewood Arsenal, Maryland, as needed.

8. A US Army Medical Officer will be available during part of each experiment to aid in data collection and/or interpretation.

9. The Contractor shall also investigate the skin penetration and sensitization phenomena with respect to selected compounds of interest to the Government. Under controlled conditions, quantitative data shall be collected and the attempt made to develop a theoretical or practical basis for the use of such data toward the facilitation or retardation of penetration of substances through skin.

B. Government Furnished Property

1. The following items of property will be made available to the Contractor, F.O.B., Contractor's facilities, should the Contracting Officer determine such action to be in the interests of the Government or necessary and essential to performance of the contract.

a. Compounds in possession of the Government which are not commercially available to the contractor (in quantities of approximately 5 gms. per compound).

b. Electronic Pupillometer 1 ea.

Check for other location

c. Trailers for Auxiliary Laboratory space 2 ea.

2. All property to be returned to the Government will be appropriately packaged and/or crated to insure acceptance by common or designated carrier and will be returned F.O.B. Edgewood Arsenal, Maryland, as directed by the Contracting Officer.

C. Period of Performance

The services required for performance of this contract shall start 1 April 1964 and be completed on or before 31 March 1967 subject to such further extension as may be mutually agreed to between the parties concerned, and to the limitations hereinafter set forth.

D. Level of Effort:

During performance of the work on this contract, the Contractor shall utilize personnel within the following categories of labor for the approximate periods of time indicated. It is agreed and understood that the actual man-hours of labor expended by the various categories of labor may prove to be more or less than estimated.

	Estimated Man-Hours of Performance			
Categories of Labor	1st Period (10 mos.)	2nd Period (12 mos.)	3rd Period (12 mos.)	4th Period (2 mos.)
On-Site Labor				
Principal Investigator	728	910	910	152
Biologist	1456	1820	1820	303
Res Lab Technicians	4368	5460	5460	910
Secretary	1456	1820	1820	303
On-Site Totals	8008	10010	10010	1668
Off-Site Labor				
Medical Officer	728	910	910	152
Medical Toxicologist	1456	1820	1820	303
Medical Assistants	1311	1638	1638	273
Lab Supervisor	364	455	455	76
Biologist	1456	1820	1820	303
Off-Site Totals	5315	6643	6643	1107
Combined Totals	13,323	16,653	16,653	2,775

E. Supervision

The Contractor agrees that the technical work covered by this contract shall be under the personal supervision of Dr. Albert M. Kligman, and that any change in such supervision shall be subject to the approval of the Contracting Officer.

F. Coordination:

1. Details of the tests to be performed, compounds to be evaluated, dose levels to be administered, and evaluations to be performed shall be closely coordinated with and will require the concurrence of the Contracting Officer's Technical Representative. (Contract Project Officer).

2. In addition, the extent of the effort to be expended by the Contractor in connection with any particular aspect of the work, or evaluation of any specific compound, will be closely coordinated with and will require the concurrence of the Contracting Officer's Technical Representative.(Contract Project Officer).

3. Work progress on any compound may be temporarily suspended, or stopped entirely, at the discretion of the Government.

G. Policy to be Followed Where the Use of Human Subjects is Involved

Any research under this contract which may involve human subjects shall be governed by, and conducted in accordance with, the policies and provisions set out in AR 70-25, dated 26 March 1962. The Contractor agrees to comply fully with the conditions of this regulation. The Contractor is not to commence experiments with subjects until approvals required by the regulation have been obtained. It shall be the responsibility of the Contracting Officer to obtain the required approvals.

H. Reports:

1. The Contractor shall submit the following reports which are to be prepared in accordance with the format set out in CRDL Memo 335-1, a copy of which will be made available to the Contractor by the Contracting Officer's Technical Representative (Contract Project Officer).

a. Monthly Progress Reports, covering the nature of the work in progress, significant achievements during the report period, difficulties being encountered, plus plans for the following period. In addition, the Monthly Progress Reports shall contain detailed and comprehensive information with respect to each compound on which testing was completed during the period covered by the report.

b. Annual Comprehensive Report -An Annual Comprehensive Report, summarizing performance for the entire previous year, including conclusions and recommendations. The last Annual Comprehensive Report will include a summary for the last year as well as conclusions and recommendations for the entire contract period.

2. Distribution:

a. Monthly Progress Reports - Thirteen (13) copies, plus a reproducible master copy (ozalid, duplimat, or equal means of reproduction) will be prepared by the Contractor and forwarded as follows:

13 copies to: Commanding Officer
US Army Chemical Research & Development Laboratories
ATTN: Contract Project Officer
(By name and Division)
Edgewood Arsenal, Maryland

b. Annual Comprehensive Reports - Twenty-three (23) copies, plus a reproducible master copy, (ozalid, duplimat, or equal means of reproduction) will be prepared by the Contractor and forwarded as follows:

GENERAL PROVISIONS

1. Definitions (FEB 1962) (ASPR 7-402.1, ASPR 7-103.1)

As used throughout this contract, the following terms shall have the meanings set forth below:

(a) The term "head of the agency" or "Secretary" means the Secretary, the Under Secretary, any Assistant Secretary, or any other head or assistant head of the executive or military department or other Federal agency; and the term "his duly authorized representative" means any person or persons or board (other than the Contracting Officer) authorized to act for the head of the agency or the Secretary.

(b) The term "Contracting Officer" means the person executing this contract on behalf of the Government, and any other officer or civilian employee who is a properly designated Contracting Officer; and the term includes, except as otherwise provided in this contract, the authorized representative of the Contracting Officer acting within the limits of his authority.

(c) Except as otherwise provided in this contract, the term "subcontracts" includes purchase orders under this contract.

2. Limitation of Cost (FEB 1950) (ASPR 7-402.2)

(a) It is estimated that the total cost to the Government for the performance of this contract will not exceed the estimated cost set forth in the Schedule, and the Contractor agrees to use its best efforts to perform the work specified in the Schedule, and all obligations under this contract within such estimated cost. If at any time the Contractor has reason to believe that the costs which he expects to incur in the performance of this contract in the next succeeding sixty (60) days, when added to all costs previously incurred, will exceed seventy-five percent (75%) of the estimated cost then set forth in the Schedule, or if at any time, the Contractor has reason to believe that the total cost to the Government for the performance of this contract will be substantially greater or less than the then estimated cost thereof, the Contractor shall notify the Contracting Officer in writing to that effect, giving the revised estimate of such total cost for the performance of this contract.

(b) The Government shall not be obligated to reimburse the Contractor for costs incurred in excess of the estimated cost set forth in the Schedule, and the Contractor shall not be obligated to continue perfor-

Limitation of Cost (continued)

mance under the contract or to incur costs in excess of the estimated cost set forth in the Schedule, unless and until the Contracting Officer shall have notified the Contractor in writing that such estimated cost has been increased and shall have specified in such notice a revised estimated cost which shall thereupon constitute the estimated cost of performance of this contract. When and to the extent that the estimated cost set forth in the Schedule has been increased, any costs incurred by the Contractor in excess of such estimated cost prior to the increase in estimated cost shall be allowable to the same extent as if such costs had been incurred after such increase in estimated cost.

3. Allowable Cost and Payment (Sep 62) (ASPR 7-402.3)

(a) For the performance of this contract, the Government shall pay to the Contractor the cost thereof (hereinafter referred to as "allowable cost") determined by the Contracting Officer to be allowable in accordance with:

(i) Part 3 of Section XV of the Armed Services Procurement Regulation as in effect on the date of this contract; and

(ii) The terms of this contract.

(b) Once each month(or at more frequent intervals, if approved by the Contracting Officer) the Contractor may submit to an authorized representative of the Contracting Officer, in such form and reasonable detail as such representative may require, an invoice or public voucher supported by a statement of cost incurred by the Contractor in the performance of this contract and claimed to constitute allowable cost.

(c) Promptly after receipt of each invoice or voucher the Government shall, subject to the provisions of (d) below, make payment thereon as approved by the Contracting Officer. After payment of an amount equal to eighty percent (80%) of the total estimated cost of performance of this contract set forth in the Schedule, further payment on account of allowable cost shall be withheld until a reserve of either one percent (1%) of such total estimated cost, or one hundred thousand dollars ($100,000), whichever is less, shall have been set aside.

(d) At any time or times prior to final payment under this contract the Contracting Officer may have invoices or vouchers and statements of cost audited. Each payment theretofore made shall be subject to reduction for amounts included in the related invoice or voucher which are found by the Contracting Officer, on the basis of such audit, not to constitute allowable cost. Any payment may be reduced for overpayments, or increased

13 copies, plus reproducible master copy to:

Commanding Officer
US Army Chemical Research & Development
Laboratories
ATTN: Contract Project Officer
(by name and division)
Edgewood Arsenal, Maryland

10 copies (without reproducible master) to:

Defense Documentation Center, Headquarters
ATTN: TISIR
5010 Duke Street
Cameron Station, Building #5
Alexandria, Virginia

3. Quarterly Status & Fiscal Reports:

a. In addition to the above reports the Contractor shall prepare and forward Quarterly Status & Fiscal Reports (in duplicate) directly to the Contracting Officer, R & D Division, Director of Procurement, Edgewood Arsenal, Maryland, ATTN: Contract Negotiator and Administrator (by name).

b. Such reports shall be prepared on SMUEA Form 3-9 copies of which will be made available to the Contractor by the Government.

II. Consideration

A. Estimated Costs

1. It is estimated that the total cost to the Government for full performance of this contract will not exceed THREE HUNDRED EIGHTY-SIX THOUSAND FIVE HUNDRED DOLLARS ($386,500) of which the sum of ONE HUNDRED ONE THOUSAND NINE HUNDRED TWENTY-THREE DOLLARS ($101,923) has been allotted to cover the estimated cost of performance from commencement of the contract through 31 January 1965.

2. It is understood and agreed that subject to the availability of funds the Government shall from time to time allot additional funds to this contract to cover the cost of performing the work subsequent to 31 January 1965, and may extend the period for which any funds have been allotted. The Contractor shall not continue performance beyond any period of which funds have been allotted until the contract has been modified to provide funding for a new period and the Government shall not be liable for any continuation of performance in violation of the terms herein.

B. Cost Determination

Allowable costs to be reimbursed to the Contractor under this contract shall be determined in accordance with the principles set forth in Part 3 of Section XV of the Armed Services Procurement Regulation in effect at the time of the execution of this contract, which Part is hereby incorporated in and made a part of this contract. With reference to the items listed below, the following specific provisions shall be applicable.

1. Direct Costs

a. Wages and Salaries

Wages and salaries and any benefits and allowances to be treated as direct costs, in addition to meeting the requirements of ASPR, Part 3, Section XV, must also be the same on the contract work as on other work performed by the Contractor at the site of the contract work, and special conditions will not be established for the contract work except as required by applicable law or as approved in writing in advance by the Contracting Officer. The Contractor shall furnish such information on employee compensation practices as the Contracting Officer may require.

b. Travel

The Contractor shall be reimbursed for the transportation expenses of the persons engaged in the performance of this contract, plus the reasonable actual subsistence expenses (not to exceed EIGHTEEN DOLLARS ($18.00) per day) of such persons, incurred during periods of travel provided that expenses for transportation hereunder by motor vehicle other than common carrier, Contractor's vehicle, or rented automobile, shall be reimbursed at the rate of TEN CENTS (10¢) per mile, plus any toll or ferry charges; provided, further, that no amounts reimbursed hereunder shall be in excess of the rates normally paid by the Contractor to employees engaged upon comparable functions, the cost of which is not reimburseable under Government contract. Travel to technical society meetings shall require prior approval of the Contracting Officer.

2. Indirect Costs

The Contractor shall be reimbursed for its indirect costs not otherwise reimbursable as direct charges to this contract at the provisional rate(s) indicated below until final rates are negotiated in accordance with the General Provision of this contract entitled "Negotiated Overhead Rates." The period for establishing such rate(s) shall be the Contractor's Fiscal Year.

a. On-Site Rate 42% of Direct Salaries & Wages.

b. Off-Site Rate 13% of Direct Salaries & Wages.

c. Employee Benefits Rate 9% of Direct Salaries and Wages.

Allowable Cost and Payment (continued)

for underpayments, on preceding invoices or vouchers.

(e) On receipt and approval of the invoice or voucher designated by the Contractor as the "completion invoice" or "completion voucher" and upon compliance by the Contractor with all the provisions of this contract (including, without limitation, the provisions relating to patents and the provisions of (f) below, the Government shall promptly pay to the Contractor any balance of allowable cost which has been withheld pursuant to (c) above or otherwise not paid to the Contractor. The completion invoice or voucher shall be submitted by the Contractor promptly following completion of the work under this contract but in no event later than one (1) year (or such longer period as the Contracting Officer may in his discretion approve in writing) from the date of such completion.

(f) The Contractor agrees that any refunds, rebates, credits, or other amounts (including any interest thereon) accruing to or received by the Contractor or any assignee under this contract shall be paid by the Contractor to the Government, to the extent that they are properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract. Reasonable expenses incurred by the Contractor for the purpose of securing such refunds, rebates, credits, or other amounts shall be allowable costs hereunder when approved by the Contracting Officer. Prior to final payment under this contract, the Contractor and each assignee under this contract whose assignment is in effect at the time of final payment under this contract shall execute and deliver:

(i) an assignment to the Government, in form and substance satisfactory to the Contracting Officer, of refunds, rebates, credits, or other amounts (including any interest thereon) properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract; and

(ii) a release discharging the Government, its officers, agents, and employees from all liabilities, obligations, and claims arising out of or under this contract, subject only to the following exceptions--

(A) specified claims in stated amounts or in estimated amounts where the amounts are not susceptible of exact statement by the Contractor;

(B) claims, together with reasonable expenses incidental thereto, based upon liabilities of the Contractor to third parties arising out of the performance of this contract; provided that such claims are not known to

 (continued on following page)

Allowable Cost and Payment (continued)

the Contractor on the date of the execution of the release; and provided further that the Contractor gives notice of such claims in writing to the Contracting Officer not more than six (6) years after the date of the release or the date of any notice to the Contractor that the Government is prepared to make final payment, whichever is earlier; and

(C) Claims for reimbursement of costs (other than expenses of the Contractor by reason of any indemnification of the Government against patent liability), including reasonable expenses incidental thereto, incurred by the Contractor under the provisions of this contract relating to patents.

(g) Any cost incurred by the Contractor under the terms of this contract which would constitute allowable cost under the provisions of this clause shall be included in determining the amount payable under this contract, notwithstanding any provisions contained in the specifications or other documents incorporated in this contract by reference, designating services to be performed or materials to be furnished by the Contractor at his expense or without cost to the Government.

4. Standards of Work (FEB 1959) (ASPR 7-402.4)

The Contractor agrees that the performance of work and services pursuant to the requirements of this contract shall conform to high professional standards.

5. Inspection (FEB 1959) (ASPR 7-402.5(b))

The Government, through any authorized representatives, has the right at all reasonable times, to inspect, or otherwise evaluate the work performed or being performed hereunder and the premises in which it is being performed. If any inspection, or evaluation is made by the Government on the premises of the Contractor or a subcontractor, the Contractor shall provide and shall require his subcontractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representatives in the performance of their duties. All inspections and evaluations shall be performed in such a manner as will not unduly delay the work.

6. Assignment of Claims (FEB 1962) (ASPR 7-402.6, ASPR 7-103.8)

(a) Pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), if this contract provides for payments aggregating $1,000 or more, claims for monies due or to become due the Contractor from the Government under this contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency, and may thereafter be further assigned and reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Unless otherwise provided in this contract, payments to an assignee of any monies due or to become due under this contract shall not, to the extent provided in said Act, as amended, be subject to reduction or set-off.

(b) In no event shall copies of this contract or of any plans, specifications, or other similar documents relating to work under this contract if marked "Top Secret," "Secret," or "Confidential," be furnished to any assignee of any claim arising under this contract or to any other person not entitled to receive the same. However, a copy of any part or all of this contract so marked may be furnished, or any information contained therein may be disclosed, to such assignee upon the prior written authorization of the Contracting Officer.

7. Examination of Records (NOV 1962)(ASPR 7-402.7, ASPR 203.7(a))

(a) (1) The Contractor agrees to maintain books, records, documents, and other evidence pertaining to the costs and expenses of this contract (hereinafter collectively called the "records") to the extent and in such detail as will properly reflect all net cost, direct and indirect, of labor, materials, equipment, supplies and services, and other costs and expenses of whatever nature for which reimbursement is claimed under the provisions of this contract.

(2) The Contractor agrees to make available at the office of the Contractor at all reasonable times during the period set forth in subparagraph (4) below any of the records for inspection, audit or reproduction by any authorized representative of the Comptroller General.

(3) In the event the Comptroller General or any of his duly authorized representatives determines that his audit of the amounts reimbursed under this contract as transportation charges will be made at a place other

Examination of Records (continued)

than the office of the Contractor, the Contractor agrees to deliver, with the reimbursement voucher covering such charges or as may be otherwise specified within two years after reimbursement of charges covered by any such voucher, to such representative as may be designated for that purpose through the Contracting Officer such documentary evidence in support of transportation costs as may be required by the Comptroller General or any of his duly authorized representatives.

(4) Except for documentary evidence delivered to the Government pursuant to subparagraph (3) above, the Contractor shall preserve and make available his records (i) for a period of three years from the date of final payment under this contract, and (ii) for such longer period, if any, as is required by applicable statute, by any other clause of this contract, or by (A) or (B) below.

(A) If this contract is completely or partially terminated, the records relating to the work terminated shall be preserved and made available for a period of three years from the date of any resulting final settlement.

(B) Records which relate to (i) appeals under the Disputes clause of this contract, (ii) litigation or the settlement of claims arising out of the performance of this contract, or (iii) cost and expenses of this contract as to which exception has been taken by the Comptroller General or any of his duly authorized representatives, shall be retained by the Contractor until such appeals, litigation, claims, or exceptions have been disposed of.

(5) Except for documentary evidence delivered pursuant to subparagraph (3) above, and the records described in subparagraph (4)(B) above, the Contractor may in fulfillment of his obligation to retain his records as required by this clause substitute photographs, microphotographs, or other authentic reproductions of such records, after the expiration of two years following the last day of the month of reimbursement to the Contractor of the invoice or voucher to which such records relate, unless a shorter period is authorized by the Contracting Officer with the concurrence of the Comptroller General or his duly authorized representative.

(6) The provisions of this paragraph (a), including this subparagraph (6), shall be applicable to and included in each subcontract hereunder which is on a cost, cost-plus-a-fixed-fee, time-and-material or labor-hour basis.

(b) The Contractor further agrees to include in each of his subcontracts hereunder, other than those set forth in subparagraph (a) (6) above,

Examination of Records (continued)

a provision to the effect that the subcontractor agrees that the Comptroller General or any of his duly authorized representatives, shall, until the expiration of three years after final payment under the subcontract, have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor involving transactions related to the subcontract. The term "subcontract," as used in this paragraph (b) only excludes (i) purchase orders not exceeding $2,500 and (ii) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.

8. Subcontracts (NOV 1962)(ASPR 7-402.8(c))

(a) The Contractor shall give advance notification to the Contracting Officer of any proposed subcontract hereunder which (i) is on a cost, cost-plus-a-fee, time and material, or labor-hour basis, or (ii) is on a fixed-price basis exceeding in dollar amount either $25,000 or five percent(5%) of the total estimated cost of this contract.

(b) In the case of a proposed subcontract which (i) is on a cost, cost-plus-a-fee, time and material, or labor-hour basis and which would involve an estimated amount in excess of $10,000, including any fee; or (ii) is proposed to exceed $100,000; or (iii) is one of a number of subcontracts under this contract with a single subcontractor for the same or related supplies or services which, in the aggregate are expected to exceed $100,000 the advance notification required by (a) above shall include:

(1) a description of the supplies or services to be called for by the subcontract;

(2) identification of the proposed subcontractor and an explanation of why and how the proposed subcontractor was selected, including the degree of competition obtained;

(3) the proposed subcontract price, together with the Contractor's cost or price analysis thereof, including current, complete, and correct cost or pricing data accompanied with a certificate from the subcontractor to the effect that all cost or pricing data has been considered by the subcontractor in preparing his proposal and that such data is current, and has been provided the Contractor; and

(4) identification of the type of contract proposed to be used.

(c) The Contractor shall not, without the prior written consent of the Contracting Officer, place any subcontract which (i) is on a cost or cost-plus a fixed-fee basis, or (ii) is on a fixed-price basis exceed-

Subcontracts (continued)

ing in dollar amount either $25,000 or five percent (5%) of the total estimated cost of this contract, or (iii) provides for the construction, purchase, rental, installation, or other acquisition of nonseverable industrial facilities, or (iv) provides for the fabrication; purchases, rental, installation or other acquisition, of any item of either (A) severable industrial facilities having a value in excess of $1,000 or the amount, if any, specified in the Schedule or Task Order, whichever is the lesser, or (B) special tooling having a value in excess of $1,000, or (v) is on a time-material or labor-hour basis, or (vi) has experimental, developmental, or research work as one of its purposes. The Contracting Officer may, in his discretion, ratify in writing any such subcontract; such action shall constitute the consent of the Contracting Officer required by this paragraph (c). (JUL 1962)

(d) The Contractor agrees that no subcontract placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis.

(e) The Contracting Officer may, in his discretion, specifically approve in writing any of the provisions of a subcontract. However, such approval or the consent of the Contracting Officer obtained as required by this clause shall not be construed to constitute a determination of the allowability of any cost under this contract, unless such approval specifically provides that it constitutes a determination of the allowability of such cost.

(f) The Contractor shall give the Contracting Officer immediate notice in writing of any action or suit filed, and prompt notice of any claim made against the Contractor by any subcontractor or vendor which, in the opinion of the Contractor, may result in litigation, related in any way to this contract with respect to which the Contractor may be entitled to reimbursement from the Government.

(g) Notwithstanding (c) above the Contractor may enter into subcontracts within (ii), or, if the subcontract is for special tooling, within (iv), of (c) above, without the prior written consent of the Contracting Officer if the Contracting Officer has, in writing, approved the Contractor's purchasing system and the subcontract is within the limitations of such approval.

(h) The Contractor shall (i) insert in each price redetermination or incentive price revision subcontract hereunder the substance of the "Limitation on Payments" paragraph set forth in the appropriate clause prescribed by paragraph 7-108 of the Armed Services Procurement Regulation, including subparagraph (4) thereof, modified to omit mention of the Government and reflect the position of the Contractor as purchaser and of the subcontractor as vendor, and to omit that portion of subparagraph (3) thereof relating to tax credits, and (ii) include in each cost-reimbursement type subcontract hereunder a requirement that each price redetermination and incentive price revision subcontract thereunder will contain the substance of the "Limitation on Payments" provision, including subparagraph (4) thereof, modified as outlined in (i) above.

 (continued on following page)

Subcontracts (continued)

(i) To facilitate small business participation in subcontracting under this contract, the Contractor agrees to provide progress payments on the fixed-price types of subcontracts of those subcontractors which are small business concerns, in conformity with the standards for customary progress payments stated in paragraphs 503 and 514 of Appendix E of the Armed Services Procurement Regulation, as in effect on the date of this contract. The Contractor further agrees that the need for such progress payments will not be considered as a handicap or adverse factor in the award of subcontracts.

9. Utilization of Small Business Concerns (JAN 1958)(ASPR 7-402.9, ASPR 1-707.3(a)

(a) It is the policy of the Government as declared by the Congress that a fair proportion of the purchases and contracts for supplies and services for the Government be placed with small business concerns.

(b) The Contractor agrees to accomplish the maximum amount of subcontracting to small business concerns that the Contractor finds to be consistent with the efficient performance of this contract.

10. Termination for the Convenience of the Government (JAN 1961)(ASPR 7-402.10, ASPR 8-704)

(a) The performance of work under this contract may be terminated, in whole or from time to time in part, by the Government whenever for any reason the Contracting Officer shall determine that such termination is in the best interests of the Government. Termination of work hereunder shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.

(b) After receipt of the Notice of Termination the Contractor shall cancel his outstanding commitments hereunder covering the procurement of materials, supplies, equipment and miscellaneous items. In addition the Contractor shall exercise all reasonable diligence to accomplish the cancellation or diversion of his outstanding commitments covering personal services and extending beyond the date of such termination to the extent that they relate to the performance of any work terminated by the notice. With respect to such cancelled commitments the Contractor agrees to (i) settle all outstanding liabilities and all claims arising out of such cancellation of commitments, with the approval or ratification of the Contracting Officer, to the extent he may require, which approval or ratification shall be final for all purposes of this clause, and (ii) assign to the Government, in the manner, at the time, and to the extent directed by the Contracting Officer, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the Government shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

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Termination for the Convenience of the Government (continued)

(c) The Contractor shall submit his termination claim to the Contracting Officer promptly after receipt of a Notice of Termination, but in no event later than one year from the effective date thereof, unless one or more extensions in writing are granted by the Contracting Officer upon written request of the Contractor within such one year period or authorized extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Contracting Officer may, subject to any Settlement Review Board approvals required by Section VIII of the Armed Services Procurement Regulation in effect as of the date of execution of this contract, determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

(d) Any determination of costs under paragraph (c) shall be governed by the cost principles set forth in Section XV, Part 3 of the Armed Services Procurement Regulation, as in effect on the date of this contract, except that if the Contractor is not an educational institution, the determination shall be governed by Section XV, Part 2, thereof.

(e) Subject to the provisions of paragraph (c) above, and subject to any Settlement Review Board approvals required by Section VIII of the Armed Services Procurement Regulation in effect as of the date of execution of this contract, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the termination under this clause, which amount or amounts may include any reasonable cancellation charges thereby incurred by the Contractor and any reasonable loss upon outstanding commitments for personal services which he is unable to cancel; provided, however, that in connection with any outstanding commitments for personal services which the Contractor is unable to cancel, the Contractor shall have exercised reasonable diligence to divert such commitments to his other activities and operations. Any such agreement shall be embodied in an amendment to this contract and the Contractor shall be paid the agreed amount.

(f) The Government may from time to time, under such terms and conditions as it may prescribe, make partial payments against costs incurred by the Contractor in connection with the terminated portion of this contract whenever, in the opinion of the Contracting Officer, the aggregate of such payments is within the amount to which the Contractor will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this clause, such excess shall be payable by the Contractor to the Government upon demand, provided that if such excess is not so paid upon demand, interest thereon shall be payable by the Contractor to the Government at the rate of 6 percent per annum, beginning 30 days from the date of such demand.

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Termination for the Convenience of the Government (continued)

(g) The Contractor agrees to transfer title and deliver to the Government, in the manner, at the time, and to the extent, if any, directed by the Contracting Officer, such information and items which, if the contract had been completed, would have been required to be furnished to the Government, including:

(i) completed or partially completed plans, drawings and information; and

(ii) materials or equipment produced or in process or acquired in connection with the performance of the work terminated by the notice.

Other than the above, any termination inventory resulting from the termination of the contract may, with the written approval of the Contracting Officer, be sold or acquired by the Contractor under the conditions prescribed by and at a price or prices approved by the Contracting Officer. The proceeds of any such disposition shall be applied in reduction of any payments to be made by the Government to the Contractor under this contract or shall otherwise be credited to the price or cost of work covered by this contract or paid in such other manner as the Contracting Officer may direct. Pending final disposition of property arising from the termination, the Contractor agrees to take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to this contract which is in the possession of the Contractor and in which the Government has or may acquire an interest.

(h) Any disputes as to questions of fact which may arise hereunder shall be subject to the "Disputes" clause of this contract.

11. Disputes (JAN 58) (ASPR 7-402.11, ASPR 7-103.12)

(a) Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Contracting Officer shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the Secretary. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fradulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor

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Disputes (continued)

shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

(b) This "Disputes" clause does not preclude consideration of law questions in connection with decisions provided for in paragraph (a) above. Provided, that nothing in this contract shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

12. Renegotiation (OCT 59) (ASPR 7-402.12, ASPR 7-103.13)

(a) To the extent required by law, this contract is subject to the Renegotiation Act of 1951 (50 U.S.C. App. 1211, et seq.), as amended, and to any subsequent act of Congress providing for the renegotiation of contracts. Nothing contained in this clause shall impose any renegotiation obligation with respect to this contract or any subcontract hereunder which is not imposed by an Act of Congress heretofore or hereafter enacted. Subject to the foregoing this contract shall be deemed to contain all the provisions required by Section 104 of the Renegotiation Act of 1951, and by any such other act, without subsequent contract amendment specifically incorporating such provisions.

(b) The Contractor agrees to insert the provisions of this clause, including this paragraph (b), in all subcontracts as that term is defined in Section 103g of the Renegotiation Act of 1951, as amended.

13. Buy American Act (JUL 1960) (ASPR 7-402.13, ASPR 6-104.5)

(a) In acquiring end products, the Buy American Act (41 U.S.C. 10a-d) provides that the Government give preference to domestic source end products. For the purpose of this clause:

(i) "components" means those articles, materials, and supplies, which are directly incorporated in the end products;

(ii) "end products" means those articles, materials, and supplies, which are to be acquired under this contract for public use; and

(iii) a "domestic source end product" means (A) an unmanufactured end product which has been mined or produced in the United States and (B) an end product manufactured in the United States if the cost of the components thereof which are mined, produced, or manufactured in the United States or Canada exceeds 50 percent of the cost of all its components. For the purpose of this (a) (iii) (B), components of foreign origin of the same type or kind as the products referred to in (b)(ii) or (iii) of this

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Buy American Act (continued)

clause shall be treated as components mined, produced, or manufactured in the United States.

(b) The Contractor agrees that there will be delivered under this contract only domestic source end products, except end products:

(i) which are for use outside the United States;

(ii) which the Government determines are not mined, produced or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality;

(iii) as to which the Secretary determines the domestic preference to be inconsistent with the public interest; or

(iv) as to which the Secretary determines the cost to the Government to be unreasonable.

(The foregoing requirements are administered in accordance with Executive Order No. 10582, dated December 17, 1954.)

14. Convict Labor (MAR 1949) (ASPR 7-402.14, ASPR 12-203)

In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor.

15. Walsh-Healey Public Contracts Act (JAN 1958) (ASPR 7-402.15, ASPR 12-605)

If this contract is for the manufacture or furnishing of materials, supplies, articles, or equipment in an amount which exceeds or may exceed $10,000 and is otherwise subject to the Walsh-Healey Public Contracts Act, as amended (41 U.S. Code 35-45), there are hereby incorporated by reference all representations and stipulations required by said Act and regulations issued thereunder by the Secretary of Labor, such representations and stipulations being subject to all applicable rulings and interpretations of the Secretary of Labor which are now or may hereafter be in effect.

16. Work Hours Act of 1962 - Overtime Compensation (OCT 1962) (ASPR 7-402.16, ASPR 12-303.1)

This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45),

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Work Hours Act of 1962 - Overtime Compensation (Continued)

is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(A) No contractor or subcontractor contracting for any part of the contract work shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work week, whichever is the greater number of overtime hours.

(B) In the event of any violation of the provisions of paragraph (A) the contractor and any subcontractor responsible for such violation shall be liable to any affected employee for his unpaid wages. In addition, such contractor or sub-contractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the provisions of paragraph (A), in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of forty hours in a work week without payment of the required overtime wages.

(C) The contracting officer may withhold, or cause to be withheld, from moneys payable on account of work performed by the contractor or subcontractor, the full amount of wages required by this contract and such sums as may administratively be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for liquidated damages as provided in paragraph (B).

17. Nondiscrimination in Employment (June 1963)(ASPR 7-402.17, ASPM 12-802)

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

 (Continued on following page)

Nondiscrimination in Employment (continued)

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 10925 of March 6, 1961, as amended, and of the rules, regulations, and relevant orders of the President's Committee on Equal Employment Opportunity created thereby.

(5) The contractor will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, as amended, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, as amended, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of the President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the President's Committee on Equal Employment Opportunity issued pursuant to section 303 of Executive Order No. 10925 of March 6, 1961, as amended, so that such provisions will be binding upon each subcontractor or vendor.* The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomse involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

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Nondiscrimination in Employment (continued)

*In accordance with regulations of the President's Committee on Equal Employment Opportunity, Subcontractors below the first tier shall not be required to insert the Nondiscrimination in Employment clause in their subcontracts, except that under contracts calling for construction, rehabilitation, alteration, conversion, extension, or repair of buildings, highways, or other improvements to real property, each Subcontractor below the first tier shall include the clause in every subcontract which calls for such work to be performed at the site of construction, or except upon Special Order of the Secretary of the Department or the Executive Vice Chairman of the President's Committee.

18. Officials Not to Benefit (JUL 1949)(ASPR 7-402.18, ASPR 7-103.19)

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

19. Covenant Against Contingent Fees (JAN 1958)(ASPR 7-402.19, ASPR 7-103.20)

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

20. Authorization and Consent (JAN 1961)(ASPR 7-402.20, ASPR 9-102.2)

The Government hereby gives its authorization and consent for all use and manufacture of any invention described in and covered by a patent of the United States in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract).

21. Notice and Assistance Regarding Patent and Copyright Infringement (FEB 1962)(ASPR 7-402.21, ASPR 9-104)

The provisions of this clause shall be applicable only if the amount of this contract exceeds $10,000.

(a) The Contractor shall report to the Contracting Officer, promptly

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Notice and Assistance Regarding Patent and Copyright Infringement
(continued)

and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any suit against the Government, or any claim against the Government made before suit has been instituted, on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall furnish to the Government, upon request, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except in those cases in which the Contractor has agreed to idemnify the Government against the claim being asserted.

22. Patent Rights (License) (Apr 1962) (ASPR 7-402.22, ASPR 9-107.2)

(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) and (h) 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 sub-

contract or subcontractor under this contract.

(b) (1) The Contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, 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. Such license (i) shall be non-transferable, except that the Government shall have the right to grant sublicenses to any foreign government or international organization specifically for use in programs established by International Agreements for research, development or production of weapons or equipment for mutual defense, and (ii) shall include the practice of Subject Invention in the manufacture, use and disposition of any article or material, in the use of any method, or in the performance of any service acquired by or for the Government or with funds derived through the Military Assistance Program of the Government or otherwise through the Government.

(2) With respect to:

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

(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; 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;

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Patent Rights (continued)

(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

Patent Rights (continued)

(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 his 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

Patent Rights (continued)

(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 disclosure 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 disclosure 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 provision of a subcontract.

(g) The Contractor shall, unless otherwise authorized by the Contracting

Officer as hereafter provided, include 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 (i) shall promptly submit a written report to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information which may expedite disposition of the matter, and (ii) shall not proceed with the subcontract without the written authorization of the Contracting Officer. 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.

(h) The Contractor shall, at the earliest practicable date, notify the Contracting Officer in writing of any subcontract containing one or more patent rights clauses; furnish the Contracting Officer a copy of each of such clauses; and notify the Contracting Officer when such subcontract is completed. It is understood that with respect to any subcontract clause granting rights to the Government in Subject Inventions, 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. If there are no subcontracts containing patent rights clauses, a negative report is required. The Contractor shall not be obligated to enforce the agreements of any subcontractor hereunder relating to the obligations of the subcontractor to the Government in regard to Subject Inventions.

(i) The Contractor recognizes that the Government, or a foreign government with funds derived through the Military Assistance Program or otherwise through the United States Government, may contract for property or services with respect to which the vendor may be liable to the Contractor for royalties for the use of a Subject Invention on account of such a contract. The Contractor further recognizes that it is the policy of the Government not to pay in connection with its contracts, or to allow to be paid in connection with contracts made with funds derived through the Military Assistance Program or otherwise through the United States Government, charges for use of patents in which the Government holds a royalty-free license. In recognition of this policy, the Contractor agrees to participate in and make appropriate arrangements for the exclusion of such charges from such contracts or for the refund of amounts received by the Contractor with respect to any such charges not so excluded.

23. Filing of Patent Applications (JAN 1955)(ASPR 7-403.2, ASPR 9-106)

(a) Before filing or causing to be filed a patent application disclosing any subject matter of this contract, which subject matter is classified "Secret" or higher, the Contractor shall, citing the thirty (30) day provision below, transmit the proposed application to the Contracting Officer for determination whether, for reasons of national security, such application should be placed under an order of secrecy or sealed in accordance with the provisions of 35 U.S. Code 181-188 or the issuance of a patent should be otherwise delayed under pertinent statutes or regulations; and the Contractor shall observe any instructions of the Contracting Officer with respect to the manner of delivery of the patent application to the U.S. Patent Office for filing, but the Contractor shall not be denied the right to file such patent application. If the Contracting Officer shall not have given any such instructions within thirty (30) days from the date of mailing or other transmittal of the proposed application, the Contractor may file the application.

(b) The Contractor shall furnish to the Contracting Officer, at the time of or prior to the time when the Contractor files or causes to be filed a patent application disclosing any subject matter of this contract, which subject matter is classified "Confidential", a copy of such application for determination whether, for reasons of national security, such application should be placed under an order of secrecy or the issuance of a patent should be otherwise delayed under pertinent statutes or regulations.

(c) In filing any patent application coming within the scope or this clause, the Contractor shall observe all applicable security regulations covering the transmission of classified subject matter.

24. Data (FEB 1962) (ASPR 7-402.23, ASPR 9-203.4) (APR 1959) (APP 9-203.1)

(a) The term "Subject Data" as used herein includes writings, sound recordings, pictorial reproductions, drawings or other graphical representations, 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) 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, nonexclusive and irrevocable license throughout the world for Government purposes to publish, translate, reproduce, deliver, perform, dispose of, and to authorize others so to do, all Subject Data now or hereafter covered by copyright.

(c) The Contractor shall not include in the Subject Data any copyrighted matter, without the written approval of the Contracting Officer, unless he provides the Government with the written permission of the copyright owner for the Government to use such copyrighted matter in the manner provided in paragraph (b) above.

(d) 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.

(e) 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.

(f) Unless otherwise limited 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.

(g) The Contractor recognizes that the Government, or a foreign government with funds derived through the Mutual Security Program or otherwise through the United States Government, may contract for property or services with respect to which the vendor may be liable to the Contractor for charges for the use of Subject Data on account of such a contract. The Contractor further recognizes that it is the policy of the Government not to pay in connection with its contracts, or to allow to be paid in connection with contracts made with funds derived through the Mutual Security Program or otherwise through the United States Government, charges for data which the Government has a right to use and disclose to others or which is in the public domain, or with respect to which the Government has been placed in possession without restrictions upon its use and disclosure to others. This policy does not apply to reasonable reproduction, handling, mailing, and similar administrative costs incident to the furnishing of such data. In recognition of this policy the Contractor agrees to participate in and make appropriate arrangements for the exclusion of such charges from such contracts or for the refund of amounts received by the Contractor with respect to any such charges not so excluded.

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Data (Continued)

(h) Notwithstanding any provisions of this contract concerning inspection and acceptance, the Government shall have the right at any time to modify, remove, obliterate or ignore any marking not authorized by the terms of this contract on any piece of Subject Data furnished under this contract.

(i) Data need not be furnished for standard commercial items or services which are normally or have been sold or offered to the public commercially by any supplier and which are incorporated as component parts in or to be used with the product or process being developed if in lieu thereof identification of source and characteristics (including performance specifications, when necessary) sufficient to enable the Government to procure the part or an adequate substitute are furnished; and further, proprietary data need not be furnished for other items which were developed at private expense and previously sold or offered for sale, including minor modifications thereof, which are incorporated as component parts in or to be used with the product or process being developed, if in lieu thereof the contractor shall identify such other items and that "proprietary data" pertaining thereto which is necessary to enable reproduction or manufacture of the item or performance of the process. For the purpose of this clause "proprietary data" means data providing information concerning the details of a Contractor's secrets of manufacture, such as may be contained in but not limited to its manufacturing methods or processes, treatment and chemical composition of materials, plant layout and tooling to the extent that such information is not disclosed by inspection or analysis of the product itself and to the extent that the Contractor has protected such information from unrestricted use by others.

(j) The rights obtained by the Government in data furnished under this contract are set forth in this clause and nothing elsewhere in this contract or in any documents incorporated by reference shall be construed as in any way altering such rights.

25. Military Security Requirements (FEB 1959)(ASPR 7-402.24(b))

(a) The provisions of this clause shall apply to the extent that this contract involves access to information classified "Confidential," including "Confidential - Modified Handling Authorized," or higher.

(b) The Government shall notify the Contractor of the security classification of this contract and the elements thereof, and of any subsequent revisions in such security classification, by the use of a Security Requirements Check List (DD Form 254), or other written notification.

(c) To the extent the Government has indicated as of the date of this contract, or thereafter indicates, security classification under this contract as provided in paragraph (b) above, the Contractor shall safeguard all classified elements of this contract and shall provide and maintain a system of security controls within his own organization in accordance with the requirements of:

(i) the Security Agreement (DD Form 441), including the Department of Defense Industrial Security Manual for Safeguarding Classified Information as in effect on the date of this contract, and any modification to the Security Agreement for the purpose of adapting the Manual to the Contractor's business; and

(ii) any amendments to said Manual made after the date of this contract, notice of which has been furnished to the Contractor by the Security Office of the Military Department having security cognizance over the facility.

(d) Representatives of the Military Department having security cognizance over the facility and representatives of the contracting Military Department shall have the right to inspect at reasonable intervals the procedures, methods, and facilities, utilized by the Contractor in complying with the security requirements under this contract. Should the Government, through these representatives determine that the Contractor is not complying with the security requirements of this contract the Contractor shall be informed in writing by the Security Office of the cognizant Military Department of the proper action to be taken in order to effect compliance with such requirements.

(e) In the event a change in security requirements, as provided in paragraphs (b) and (c), result (i) in a change in the security classification of this contract or any element thereof from a nonclassified status to a classified status or from a lower classification to a higher classification, or (ii) in more restrictive area controls than previously required, the Contractor shall exert every reasonable effort compatible with its established policies to continue the performance of work under the contract in compliance with such change in security classification or requirements. If, despite such reasonable efforts, the Contractor determines that the continuation of work under this contract is not practicable because of such change in security classification or requirements he shall so notify the Contracting Officer in writing.

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Military Security Requirements (continued)

(f) After receiving such written notification, the Contracting Officer shall explore the circumstances surrounding the proposed change in security classification or requirements and shall endeavor to work out a mutually satisfactory method whereby the Contractor can continue performance of the work under this contract.

(g) If, upon the expiration of fifteen (15) days after receipt by the Contracting Officer of the notification of the Contractor's stated inability to proceed, (i) the application to this contract of such change in security classification or requirements has not been withdrawn, or (ii) a mutually satisfactory method for continuing performance of work under this contract has not been agreed upon, the Contractor may request the Contracting Officer to terminate the contract in whole or in part. Thereupon, the Contracting Officer shall terminate the contract in whole or in part, as may be appropriate, and such termination shall be deemed a termination under the provisions of the clause of this contract entitled "Termination for the Convenience of the Government."

(h) The Contractor agrees to insert, in all subcontracts hereunder which involve access to classified information, provisions which shall conform substantially to the language of this clause, including this paragraph (h) but excluding paragraphs (e), (f), and (g) of this clause. In addition, the Contractor may insert in any subcontract, not involving fee or profit, with an educational institution, and any like lower-tier subcontract entered into thereunder may contain, in lieu of paragraphs (e), (f), and (g) of this clause, appropriate provisions extending to such subcontracts relief consistent with that provided for in those paragraphs, on account of changes in security classifications or requirements made under the provisions of this clause subsequent to the date of the subcontract involved. With respect to subcontracts other than those covered by the preceding sentence, "the mutually satisfactory method" provided for in paragraph (f) above may include a provision amending this contract to provide for an equitable adjustment on account of changes in security classifications or requirements made under the provisions of this clause subsequent to the date of the subcontract involved; and the Contractor may insert in any such subcontract, and any like lower-tier subcontract entered into thereunder may contain, in lieu of paragraphs (e), (f), and (g) of this clause, appropriate provisions with respect to such equitable adjustment. Failure of the Contractor and Contracting Officer to agree to any adjustment pursuant to the preceding sentence shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes."

(i) The Contractor also agrees that he shall determine that any subcontractor proposed by him for the performance of a subcontract hereunder which will involve access to classified information in the Contractor's custody has been granted an appropriate facility security clearance which is still in effect, prior to being accorded access to such classified information.

26. Government Property (APR 1962) (ASPR 7-402.25, ASPR 13-506)

(a) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the property described in this contract, together with such related data and information as the Contractor may request and as may reasonably be required for the intended use of such property (hereinafter referred to as "Government-furnished Property"). The delivery or performance dates for the supplies or services to be furnished by the Contractor under this contract are based upon the expectation that Government-furnished Property suitable for use will be delivered to the Contractor at the times stated in the Schedule of this contract, or if not so stated, in sufficient time to enable the Contractor to meet such delivery or performance dates. In the event that Government-furnished Property is not delivered to the Contractor by such time or times, the Contracting Officer shall, upon timely written request made by the Contractor, make a determination of the delay occasioned the Contractor and shall equitably adjust the estimated cost, or delivery or performance dates, or both, and any other contractual provisions affected by such delay. In the event that the Government-furnished Property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt thereof, notify the Contracting Officer of such fact, and, as directed by the Contracting Officer, either (i) return such property at the Government's expense or otherwise dispose of such property, or (ii) effect repairs or modifications. Upon completion of (i) or (ii) above, the Contracting Officer upon timely written request of the Contractor shall equitably adjust the estimated cost, or delivery or performance dates, or both and any other contractual provision affected by the return, disposition, repair or modification. The foregoing provisions for adjustment are exclusive and the Government shall not be liable for suit for breach of contract by reason of any delay in delivery of Government-furnished Property or delivery of such property in a condition not suitable for its intended use.

(b) The Government may deliver to the Contractor Government-furnished Property in addition to that set forth in this contract. Upon such delivery this contract may be amended, if appropriate, to accomplish an equitable adjustment in its terms and provisions.

(c) Title to all property furnished by the Government shall remain in the Government. Title to all property purchased by the Contractor, for the cost of which the Contractor is to be reimbursed as a direct item of cost under this contract, shall pass to and vest in the Government upon delivery of such property by the vendor. Title to other property, the cost of which is to be reimbursed to the Contractor under this contract, shall pass to and vest in the Government upon (i) issuance for use of such property in the performance of this contract, or (ii) commencement of processing or use of such property in the performance of this contract, or (iii) reimbursement of the cost thereof by the Government, whichever first occurs. All Government-furnished Property, together with all property acquired by the Contractor, title to which vests in the Government under this paragraph, are subject to the provisions of this clause and are hereinafter

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collectively referred to as "Government Property." Notwithstanding the provisions of this paragraph (c) relative to title, the Contracting Officer may at any time during the term of this contract, or upon completion or termination, transfer title to equipment to the Contractor upon such terms and conditions as may be agreed upon; provided that, the Contractor shall not under any Government contract, or subcontract thereunder, charge for any depreciation, amortization or use of such equipment as is donated under this paragraph. Upon the transfer of title to equipment under this paragraph, such equipment shall cease to be Government property.

(d) Title to the Government Property shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such Government Property, or any part thereof, be or become a fixture or lose its identity as personalty by reason of affixation to any realty.

(e) The Government Property provided or furnished pursuant to the terms of this contract shall, unless otherwise provided herein and except as may be otherwise approved by the Contracting Officer, be used only for the performance of this contract.

(f) The Contractor shall maintain and administer in accordance with sound business practice a program for the maintenance, repair, protection and preservation of Government property so as to assure its full availability and usefulness for the performance of this contract. The Contractor shall take all reasonable steps to comply with all appropriate directions or instructions which the Contracting Officer may prescribe as reasonably necessary for the protection of the Government Property.

(g) The provisions of Part III, Appendix C, Armed Services Procurement Regulation, Manual for Control of Government Property in Possession of Non-Profit Research and Development Contractors, as in effect on the date of this contract, are herein incorporated by reference and made a part of this contract. The Contractor agrees to comply with the provisions thereof relating to the keeping of property control records, identification and marking, segregation and commingling, taking of inventories, and control of salvage and scrap, and the Contractor also accepts the responsibilities set forth in said Part III with respect to Government Property.

(h) The Contractor agrees to make available to authorized representatives of the Contracting Officer at all reasonable times at the office of the Contractor all of his property records under this contract, and access to any premises where any of the Government Property is located.

(i) (1) The Contractor shall not be liable for any loss of or damage to the Government Property, or for expenses incidental to such loss or damage, except that the Contractor shall be responsible for

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Government Property (continued

any such loss or damage (including expenses incidental thereto)

(i) which results from willful misconduct or lack of good faith on the part of any of the Contractor's directors or officers, or on the part of any of his managers, superintendents, or other equivalent representatives, who has supervision of direction of all or substantially all of the Contractor's business, or all or substantially all of the Contractor's operations at any one plant, laboratory, or separate location in which this contract is being performed;

(ii) which results from a failure on the part of the Contractor, due to willful misconduct or lack of good faith on the part of any of his directors, officers, or other representatives mentioned in (i) above, (A) to maintain and administer, in accordance with sound business practice, the program for maintenance, repair, protection and preservation of Government Property as required by (f) above, or (B) to take all reasonable steps to comply with any appropriate written directions of the Contracting Officer under (f) above;

(iii) for which the Contractor is otherwise responsible under the express terms of the clause or clauses designated in the schedule;

(iv) which results from a risk expressly required to be insured under some other provision of this contract, but only to the extent of the insurance so required to be procured and maintained, or to the extent of insurance actually procured and maintained, whichever is greater; or

(v) which results from a risk which is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement; provided that, if more than one of the above exceptions shall be applicable in any case, the Contractor's liability under any one exception shall not be limited by any other exception.

(2) The Contractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance, or any provision for a reserve, covering the risk of loss of or damage to the Government Property, except to the extent that the Government may have required the Contractor to carry such insurance under any other provision of this contract.

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Government Property (continued)

(3) Upon the happening of loss or destruction of or damage to the Government Property, the Contractor shall notify the Contracting Officer thereof, and shall communicate with the Loss and Salvage Organization, if any, now or hereafter designated by the Contracting Officer, and with the assistance of the Loss and Salvage Organization so designated (unless the Contracting Officer has designated that no such organization be employed), shall take all reasonable steps to protect the Government Property from further damage, separate the damaged and undamaged Government Property, put all the Government Property in the best possible order, and furnish to the Contracting Officer a statement of:

(i) the lost, destroyed and damaged Government Property;

(ii) the time and origin of the loss, destruction or damage;

(iii) all known interests in commingled property of which the Government Property is a part; and

(iv) the insurance, if any, covering any part of or interest in such commingled property.

The Contractor shall make repairs and renovations of the damaged Government Property or take such other action as the Contracting Officer directs.

(4) In the event the Contractor is indemnified, reimbursed, or otherwise compensated for any loss or destruction of or damage to the Government property, he shall use the proceeds to repair, renovate or replace the Government property involved, or shall credit such proceeds against the cost of the work covered by the contract, or shall otherwise reimburse the Government, as directed by the Contracting Officer. The Contractor shall do nothing to prejudice the Government's right to recover against third parties for any such loss, destruction or damage and, upon the request of the Contracting Officer, shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including assistance in the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery.

(j) The Government Property shall remain in the possession of the Contractor for such period of time as is required for the performance of this contract unless the Contracting Officer determines that the interests of the Government require removal of such property. In such case the Contractor shall promptly take such action as the Contracting Officer may direct with respect to the removal and shipping of Government Property. In any such instance this contract may be amended to accomplish an equitable adjustment in its terms and provisions.

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Government Property (continued)

(k) Upon completion or expiration of this contract, any Government Property which has not been consumed in the performance of this contract, or which has not been disposed of as hereinafter provided in subparagraph (l) of this clause, or for which the Contractor has not otherwise been relieved of responsibility, shall be disposed of in the same manner, and subject to the same procedures, as is provided in subparagraph (g) of the clause of this contract entitled "Termination for the Convenience of the Government" with respect to termination inventory. The proceeds of any such disposition shall be applied in reduction of any payments to be made by the Government to the Contractor under this contract, or shall otherwise be credited to the cost of the work covered by this contract, or shall be paid in such other manner as the Contracting Officer may direct. Pending final disposition of such property, the Contractor agrees to take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation thereof.

(l) If the Contracting Officer determines that the interests of the Government require removal of any Government Property, or if the Contractor determines any Government Property to be in excess of his needs under this contract, such Government Property shall be disposed of in the same manner as provided by subparagraph (k) above. In the event that the Contracting Officer requires the removal of any Government Property under this subparagraph (l) or subparagraph (k) above, the direct cost to the Contractor of such removal and of any property damage occasioned thereby shall constitute an allowable cost thereunder.

(m) Unless otherwise provided herein, the Government shall not be under any duty or obligation to restore or rehabilitate, or to pay the costs of the restoration or rehabilitation of the Contractor's plant or any portion thereof which is affected by the removal of any Government Property.

(n) Directions of the Contracting Officer and communications of the Contractor issued pursuant to this clause shall be in writing.

27. Insurance - Liability to Third Persons (JAN 1960) (ASPR 7-402.26, ASPR 7-203.22)

(a) The Contractor shall procure and thereafter maintain workmen's compensation, employer's liability, comprehensive general liability (bodily injury) and comprehensive automobile liability (bodily injury and property damage) insurance, with respect to performance under this contract, and such other insurance as the Contracting Officer may from time to time require with respect to performance under this contract; provided, that the Contractor may with the approval of the Contracting Officer maintain a self-insurance program, and provided further, that with respect to workmen's compensation the Contractor is qualified pursuant to statutory authority. All insurance required pursuant to the provisions of this paragraph shall be in such form, in such amounts, and for such periods of time, as the Contracting Officer may from time to time require or approve, and with insurers approved by the Contracting Officer.

(b) The Contractor agrees, to the extent and in the manner required by the Contracting Officer, to submit for the approval of the Contracting Officer any other insurance maintained by the Contractor in connection with the performance of this contract and for which the Contractor seeks reimbursement hereunder.

(c) The Contractor shall be reimbursed: (i) for the portion allocable to this contract of the reasonable cost of insurance as required or approved pursuant to the provisions of this clause, and (ii) for liabilities to third persons for loss of or damage to property (other than property (A) owned, occupied or used by the Contractor or rented to the Contractor or (B) in the care, custody, or control of the Contractor), or for death or bodily injury, not compensated by insurance or otherwise, arising out of the performance of this contract, whether or not caused by the negligence of the Contractor, his agents, servants or employees, provided such liabilities are represented by final judgments or by settlements approved in writing by the Government, and expenses incidental to such liabilities, except liabilities (I) for which the Contractor is otherwise responsible under the express terms of the clause or clauses, if any, specified in the schedule, or (II) with respect to which the Contractor has failed to insure as required or maintain insurance as approved by the Contracting Officer or (III) which results from willful misconduct or lack of good faith on the part of any of the Contractor's directors or officers, or on the part of any of his managers, superintendents, or other equivalent representatives, who has supervision or direction of (1) all or substantially all of the Contractor's business, or (2) all or substantially all of the Contractor's operations at any one plant or separate location in which this contract is being performed or (3) a separate and complete major industrial operation in connection with the performance of this contract. The foregoing shall not restrict the right of the Contractor to be reimbursed for the cost of insurance maintained by the Contractor in connection with the

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Insurance - Liability to Third Persons (continued)

performance of this contract, other than insurance required to be submitted for approval or required to be procured and maintained pursuant to the provisions of this clause, provided such cost would constitute Allowable Cost, under the clause of this contract entitled "Allowable Cost, Fixed Fee and Payment."

(d) The Contractor shall give the Government or its representatives immediate notice of any suit or action filed, or prompt notice of any claim made, against the Contractor arising out of the performance of this contract, the cost and expense of which may be reimbursable to the Contractor under the provisions of this contract, and the risk of which is then uninsured or in which the amount claimed exceeds the amount of coverage. The Contractor shall furnish immediately to the Government copies of all pertinent papers received by the Contractor. If the amount of the liability claimed exceeds the amount of coverage, the Contractor shall authorize representatives of the Government to collaborate with counsel for the insurance carrier, if any, in settling or defending such claim. If the liability is not insured or covered by bond, the Contractor shall, if required by the Government, authorize representatives of the Government to settle or defend any such claim and to represent the Contractor in or take charge of any litigation in connection therewith; provided, however, that the Contractor may, at his own expense, be associated with the representatives of the Government in the settlement or defense of any such claim or litigation.

28. Utilization of Concerns in Labor Surplus Areas (FEB 1962) (ASPR 7-402.27) ASPR 1-805.3(a))

It is the policy of the Government to place contracts with concerns which will perform such contracts substantially in areas of persistent or substantial labor surplus where this can be done, consistent with the efficient performance of the contract, at prices no higher than are obtainable elsewhere. The Contractor agrees to use his best efforts to place his subcontracts in accordance with this policy. In complying with the foregoing and with paragraph (b) of the clause of this contract entitled "Utilization of Small Business Concerns," the Contractor in placing his subcontracts shall observe the following order of preference: (i) persistent labor surplus area concerns which are also small business concerns; (ii) other persistent labor surplus area concerns; (iii) substantial labor surplus area concerns which are also small business concerns; (iv) other substantial labor surplus area concerns; and (v) small business concerns which are not labor surplus area concerns.

29. Payment for Overtime and Shift Premiums (FEB 1962) (ASPR 7-402.28, ASPR 12-102.3)

(a) Allowable cost shall not include any amount on account of overtime premiums or shift premiums, except to the extent that they either (i) are approved in writing on behalf of the Government or (ii) are paid for work —

(A) necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(B) by indirect labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(C) in the performance of tests, industrial processes, laboratory procedures, loading or unloading of transportation media, and operations in flight or afloat, which are continuous in nature and cannot reasonably be interrupted or otherwise completed; or

(D) which will result in lower overall cost to the Government.

(b) The cost of overtime premiums or shift premiums otherwise allowable under (a) above shall be allowed only to the extent the amount thereof is reasonable and properly allocable to the work under this contract.

30. Competition in Subcontracting (APR 1962) (ASPR 7-402.29, ASPR 7-104.40)

The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

31. Priorities, Allocations and Allotments (JAN 1961) (ASPR 7-403.7, ASPR 7-104.18)

The Contractor shall follow the provisions of DMS Reg. 1 and all other applicable regulations and orders of the Business and Defense Services Administration in obtaining controlled materials and other products and materials needed to fill this order.

32. Negotiated Overhead Rates (Postdetermined) (MAR 1963) (ASPR 7-403.9, ASPR 3-704.2)

(a) Notwithstanding the provisions of the clause of this contract entitled "Allowable Cost and Payment," the allowable indirect costs under this contract shall be obtained by applying negotiated overhead rates to the bases agreed upon by the parties, as specified below.

(b) The Contractor, as soon as possible but not later than six (6) months after the expiration of each period specified in the Schedule shall submit to the Contracting Officer with a copy to the cognizant audit activity, a proposed final overhead rate or rates for that period based on the Contractor's actual cost experience during that period, together with supporting cost data. Negotiation of final overhead rates by the Contractor and the Contracting Officer shall be undertaken as promptly as practicable after receipt of the Contractor's proposal.

(c) Allowability of costs and acceptability of cost allocation methods shall be determined in accordance with the Armed Services Procurement Regulation, Section XV, Part 3, as in effect on the date of this contract.

(d) The results of each negotiation shall be set forth in a modification to this contract, which shall specify (i) the agreed final rates, (ii) the bases to which the rates apply, and (iii) the periods for which the rates apply.

(e) Pending establishment of final overhead rates for any period, the Contractor shall be reimbursed either at negotiated provisional rates as provided in the Schedule or at billing rates acceptable to the Contracting Officer, subject to appropriate adjustment when the final rates for that period are established. To prevent substantial over or under payment, the provisional or billing rates may, at the request of either party, be revised by mutual agreement, either retroactively or prospectively. Any such revision or negotiated provisional rates provided in the Schedule shall be set forth in a modification to this contract.

(f) Any failure by the parties to agree on any final rate or rates under this clause shall be considered a dispute concerning a question of fact for decision by the Contracting Officer within the meaning of the "Disputes" clause of this contract.

33. Notice to the Government of Labor Disputes (SEPT 58) (ASPR 7-403.10, ASPR 7-104.4)

(a) Whenever the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Contracting Officer.

(b) The Contractor agrees to insert the substance of this clause, including this paragraph (b), in any subcontract hereunder as to which a labor dispute may delay the timely performance of this contract; except that each such subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify his next higher tier subcontractor, or the prime contractor, as the case may be, of all relevant information with respect to such dispute.

34. Gratuities (MAR 52) (ASPR 7-403.11, ASPR 7-104.16)

(a) The Government may, by written notice to the Contractor, terminate the right of the Contractor to proceed under this contract if it is found, after notice and hearing, by the Secretary or his duly authorized representative, that gratuities (in the form of entertainment, gifts, or otherwise) where offered or given by the Contractor, or any agent or representative of the Contractor, to any officer or employee of the Government with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such contract; provided, that the existence of the facts upon which the Secretary or his duly authorized representative makes such findings shall be in issue and may be reviewed in any competent court.

(b) In the event this contract is terminated as provided in paragraph (a) hereof, the Government shall be entitled (i) to pursue the same remedies against the Contractor as it could pursue in the event of a breach of the contract by the Contractor, and (ii) as a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the Secretary or his duly authorized representative) which shall be not less than three nor more than ten times the costs incurred by the Contractor in providing any such gratuities to any such officer or employee.

(c) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

35. Limitation on Withholding of Payments (FEB 1959)(ASPR 7-403.12)

If more than one clause or Schedule provision of this contract authorizes the temporary withholding of amounts otherwise payable to the Contractor for work performed under this contract, the total of the amounts so withheld at any one time shall not exceed the greatest amount which may be withheld under any one such clause or Schedule provision at that time; provided, that this limitation shall not apply to:

(i) withholdings pursuant to any clause relating to wages or hours of employees;

(ii) withholdings not specifically provided for by this contract; and

(iii) the recovery of overpayments.

36. Changes (FEB 1959) (ASPR 7-404.1)

The Contracting Officer may at any time, by a written order, and without notice to the sureties, if any, make changes, within the general scope of this contract, in any one or more of the following: (i) drawings, designs, or specifications, (ii) method of shipment or packing; (iii) place of inspection, delivery, or acceptance, and (iv) the amount of Government-furnished property. If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of this contract, or otherwise affects any other provisions of this contract, whether changed or not changed by any such order, an equitable adjustment shall be made (i) in the estimated cost or delivery schedule, or both, (ii) in the amount of any fee to be paid to the Contractor, and (iii) in such other provisions of the contract as may be so affected, and the contract shall be modified in writing accordingly. Any claim by the Contractor for adjustment under this clause must be asserted within thirty (30) days from the date of receipt by the Contractor of the notification of change; provided, however, that the Contracting Officer, if he decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this contract. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes." However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

37. Reports of Work (JUL 1960) (ASPR 7-404.6)

(a) The Contractor shall submit reports making full disclosure of all work done and the results thereof, in the manner, at the times, and to the extent set forth in the Schedule; provided that, unless otherwise specified in the Schedule, the Contractor shall submit such reports in triplicate from time to time as requested and upon completion (or earlier termination) of the work. Except as may be otherwise specified in the Schedule, or unless the Contractor is otherwise instructed, the Contractor shall, upon completion (or earlier termination) of the work, deliver any working drawings and specifications of any prototypes as may have been developed.

(b) If the Contractor becomes unable to complete the contract work and to deliver at the time specified in the Schedule because of technical difficulties, notwithstanding the exercise of good faith and diligent efforts in performance of the work, he shall give the Contracting Officer written notice of the anticipated delays with reasons therefor, not less than forty-five (45) days before the completion date specified in the Schedule or within such time as the Contracting Officer deems sufficient. When notice is so required, the Contracting Officer may, in his discretion, extend the time specified in the Schedule for such period as he deems advisable.

38. Unauthorized Instructions From Government Personnel

a. The Contractor will not accept any instructions issued by any person employed by the U. S. Government or otherwise, other than the Contracting Officer or the Contracting Officer's representative or Project Officer acting within the limits of his authority. Contracting Officer's representative or Project Officer will be so designated in writing to the Contractor, and the scope of their authority will be set forth therein.

b. No information, other than that which may be contained in an authorized amendment to this Purchase Instrument duly issued by the Contracting Officer, which may be received from any person employed by the U. S. Government or otherwise, will be considered as grounds for deviation from any stipulations of this Purchase Instrument or referenced drawings or specifications herein.

39. General Services Administration Supply Sources (JUL 1962)(ASPR 7-402.23, ASPR 5-907)

The Contracting Officer may issue the Contractor an authorization to utilize General Services Administration supply sources for property to be used in the performance of this contract. Title to all property acquired under such an authorization shall be in the Government. All property acquired under such an authorization shall be subject to the provisions of paragraphs (b) through (k) of the clause of this contract entitled "Government Property," unless this contract is for research and development with a non-profit institution executed on a no-fee basis, in which case paragraphs (c) through (n) shall apply.

cc. Audit and Records (NOV 1962)(ASPR 7-402.30, ASPR 7-104.41(c))

(a) The Contractor shall maintain books, records, documents, and other evidence and accounting procedures and practices, sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of this contract. The foregoing constitute "records" for the purposes of this clause.

(b) The Contractor's plants, or such part thereof as may be engaged in the performance of this contract, and his records shall be subject at all reasonable times to inspection and audit by the Contracting Officer or his authorized representative.

(c) The Contractor shall preserve and make available his records (i) until the expiration of three years from the date of final payment under this contract, and (ii) for such longer period, if any, as is required by applicable statute, or by other clauses of this contract, or by (A) or (B) below.

(A) If this contract is completely or partially terminated, the records relating to the work terminated shall be preserved and made available for a period of three years from the date of any resulting final settlement.

(B) Records which relate to (i) appeals under the "Disputes" clause of this contract or (ii) litigation or the settlement of claims arising out of the performance of this contract, shall be retained until such appeals, litigation or claims have been disposed of.

(d) (1) The Contractor shall insert the substance of this clause, including the whole of this paragraph (d), in each subcontract hereunder that is not on a firm fixed-price basis.

(2) The Contractor shall insert the substance of the following clause in each firm fixed-price subcontract hereunder in excess of $100,000, except those subcontracts covered by subparagraph (3) below.

AUDIT -

(a) For purposes of verifying that cost or pricing data submitted in conjunction with the negotiation of this contract or any contract change or other modification involving an amount in excess of $100,000 are accurate, complete, and current, the Contracting Officer, or his authorized represenatives, shall - until the expiration of three years from the date of final payment under this contract - have the right to examine those books, records, documents, and other supporting data which will permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used therein, which were available to the Contractor as of the date of execution of the Contractor's Certificate of Current Cost or Pricing Data.

(b) The Contractor agrees to insert the substance of this clause including this paragraph (b) in all subcontracts hereunder in excess of $100,000 unless the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

Audit and Records (continued)

(3) The Contractor shall insert the substance of the following clause in each firm fixed-price subcontract hereunder in excess of $100,000 where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

AUDIT - PRICE ADJUSTMENTS

(a) This clause shall become operative only with respect to any change or other modification made pursuant to one or more provisions of this contract which involves a price adjustment in excess of $100,000, unless the price adjustment is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

(b) For purposes of verifying that any cost or pricing data submitted in conjunction with a contract change or other modification involving an amount in excess of $100,000 are accurate complete, and current, the Contracting Officer, or his authorized representatives, shall- until the expiration of three years from the date of final payment under this contract - have the right to examine those books, records, documents and other supporting data which will permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used therein, which were available to the Contractor as of the date of execution of the Contractor's Certificate of Current Cost or Pricing Data.

(c) The Contractor agrees to insert the substance of this clause including this paragraph (c) in all subcontracts hereunder in excess of $100,000 unless the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

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41. Price Reduction for Defective Cost or Pricing Data (MAR 1963) ASPR 7-402.31, ASPR 7-104.29(a)

(a) If the Contracting Officer determines that any price, including profit or fee, negotiated in connection with this contract was increased by any significant sums because the Contractor, or any subcontractor in connection with a subcontract covered by (c) below, furnished incomplete or inaccurate cost or pricing data or data not current as certified in the Contractor's Certificate of Current Cost or Pricing Data, then such price shall be reduced accordingly and the contract shall be modified in writing to reflect such adjustment.

(b) Failure to agree on a reduction shall be a dispute concerning a question of fact within the meaning of the "Disputes" clause of this contract.

(c) The Contractor agrees to insert the substance of paragraphs (a) and (c) of this clause in each of his cost-reimbursement type, price redeterminable, or incentive subcontracts hereunder, and in any other subcontract hereunder in excess of $100,000 unless the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. In each such excepted subcontract hereunder which exceeds $100,000, the Contractor shall insert the substance of the following clause.

PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA-PRICE ADJUSTMENTS

(a) This clause shall become operative only with respect to any change or other modification made pursuant to one or more provisions of this contract which involves a price adjustment in excess of $100,000, except where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The right to price reduction under this clause shall be limited to such price adjustments.

(b) If the Contractor determines that any price, including profit or fee, negotiated in connection with any price adjustment under this contract was increased by any significant sums because the subcontractor or any of his subcontractors in connection with a subcontract covered by paragraph (c) below, furnished incomplete or inaccurate cost or pricing data or data not current as of the date of execution of the subcontractor's certificate of current cost or pricing data, then such price shall be reduced accordingly and the subcontract shall be modified in writing to reflect such adjustment.

(c) The subcontractor agrees to insert the substance of this clause in each subcontract hereunder which exceeds $100,000.

42. Subcontractor Cost and Pricing Data (MAR 1963) (ASPR 7-402.32, ASPR 7-104.42(a)

(a) The Contractor shall require subcontractors hereunder to submit cost or pricing data under the following circumstances: (i) prior to award of any cost-reimbursement type, incentive, or price redeterminable subcontract; (ii) prior to the award of any subcontract the price of which is expected to exceed $100,000; (iii) prior to the pricing of any subcontract change or other modification for which the price adjustment is expected to exceed $100,000; except in the case of (ii) or (iii) where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

(b) The Contractor shall require subcontractors to certify, in substantially the same form as that used in the certificate by the Prime Contractor to the Government, that to the best of their knowledge and belief, the cost and pricing data submitted under (a) above is accurate, complete, and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the subcontract.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in each subcontract hereunder which exceeds $100,000, except where the price thereof is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. In each such excepted subcontract hereunder in excess of $100,000 the Contractor shall insert the substance of the following clause:

SUBCONTRACTOR COST AND PRICING DATA - PRICE ADJUSTMENTS

(a) Paragraphs (b) and (c) of this clause shall become operative only with respect to any change or other modification made pursuant to one or more provisions of this contract which involves a price adjustment in excess of $100,000. The requirements of this clause shall be limited to such price adjustments.

(b) The Contractor shall require subcontractors hereunder to submit cost or pricing data under the following circumstances: (i) prior to award of any cost-reimbursement type, incentive, or price redeterminable subcontract; (ii) prior to award of any subcontract, the price of which is expected to exceed $100,000; (iii) prior to the pricing of any subcontract change or other modification for which the price adjustment is expected to exceed $100,000; except, in the case of (ii) or (iii), where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

(c) The Contractor shall require subcontractors to certify, in substantially the same form as that used in the Certificate by the Prime Contractor to the Government, that to the best of their knowledge

Subcontractor Cost and Pricing Data (Continued)

and belief the cost and pricing data submitted under (b) above is accurate, complete, and current as of the date of the execution, which date shall be as close as possible to the date of agreement on the negotiated price of the contract modification.

(d) The Contractor shall insert the substance of this clause including this paragraph (d) in each subcontract hereunder which exceeds $100,000.

13. Refund of Royalties APP 9-110 (Feb 63)

(1) The term "royalties," as used in this clause, refers to any payment or charge such as royalties, license fees, rental fees, amortization costs and the like, for the use of, or rights in copyrights, patents, and patent applications.

(2) If in connection with the performance of this contract or any contract hereunder containing this clause, the amount of royalties paid or required to be paid is less than the amount reported during the negotiation of the contract or subcontract, or any modification of either, the contractor, and the subcontractor through the prime contractor, shall so inform the Contracting Officer and the contract price shall be reduced to the extent of the decrease in royalties. Payment or credit to the Government shall be made as the Contracting Officer may direct.

(3) This clause, including this subparagraph (3) shall be included in those subcontracts which require the approval of the Contracting Officer and in which the amount of royalties reported during negotiation of the subcontract exceeds $250.00.

44 Care of Experimental Animals (DEC 1961)(APP 7-303.50)

(a) The contractor agrees to adhere to the following principles in the care of any experimental animals utilized in the performance of this contract:

(i) The acquisition and use of all animals for experimental purposes shall be in compliance with Federal, state, and local laws.

(ii) Research projects involving live animals must be performed by, or under the immediate supervision of, a qualified biological scientist.

(iii) The housing, care, and feeding of all experimental animals shall be supervised by a properly qualified veterinarian or other biological scientist competent in such matters.

(iv) All laboratory animals must receive every consideration for their comfort; they must be kindly treated, properly fed, and their surroundings kept in a sanitary condition.

(v) Rooms in which animals are to be housed shall be provided with a floor which can be kept clean, and the room shall be lighted and ventilated. The temperature shall be held within reasonable limits. Cages should be of sufficient size to permit the animals used to stand or lie in a normal position. It is generally conceded that animals maintained for long periods are in better physiological condition if they exercise regularly. Species housed out-of-doors should be given adequate protection from direct sunlight or inclement weather.

(vi) The food and water supplied to all experimental animals, subject to the nature of the research, must be palatable, and of sufficient quantity and proper quality to maintain the animals in good health.

(vii) In any operation likely to cause greater discomfort than that attending anesthetization, the animals shall first be rendered incapable of perceiving pain and be maintained in that condition until the operation is ended.

(A) Whenever anesthetization would defeat the purpose of the experiment then the experiment must be approved by the head of the contractor research department or directly supervised by the head of his laboratory.

(B) If an acute study does not require survival, the animal must be killed in a humane manner at the conclusion of the experiment.

Care of Experimental Animals (continued)

(C) If the nature of the study is such as to require survival of the animal, then acceptable techniques must be followed throughout the operation.

(viii) The post-operative care of animals must be such as to minimize discomfort during convalescense in accordance with acceptable hospital practice.

(ix) The care and housing of individual species will be in accordance with the recommendations of the Institute of Laboratory Animal Resources, National Academy of Sciences, Washington 25, D.C., in effect on the date of this contract and in accordance with such supplements and amendments thereto as may be agreed upon by the Contractor and the Government.

45 Limitation of Government's Obligation (Aug. 1962) (AFPI 7-4054) (b)

(1) It is estimated that the total cost to the Government, inclusive of any fixed fee, for the performance of this contract will not exceed the estimated cost and fixed fee set forth in the schedule, and the Contractor agrees to use its best efforts to perform the work specified in the schedule and all obligations under this contract within such estimated cost. The fixed fee for complete performance of this contract is specified in the schedule. If at any time, the Contractor has reason to believe that the total cost to the Government, inclusive of any fee, for the performance of this contract will be substantially greater or less than the amounts thereof then set forth in the Schedule to date, the Contractor shall notify the Contracting Officer in writing to that effect, giving its revised estimate of the total cost to the Government for the performance of this contract.

(2) The sum presently available for payment and allotted to this contract, the items covered thereby and the period of performance which it is estimated the allotted amount will cover, are specified in the schedule. It is anticipated that from time to time additional funds will be allotted to this contract up to the full estimated cost, including any fixed fee. When additional funds are allotted from time to time for continued performance of the work, the parties shall agree as to the applicable estimated period of contract performance which shall be covered by such funds and the contract schedule amended accordingly. The Contractor agrees to perform or have performed work on this contract up to the point at which, in the event of termination of this contract for the convenience of the Government pursuant to the clause of this contract entitled "Termination," the total amount paid and payable by the Government pursuant to any settlement including cost and fixed fee under Paragraph (e) of such clause would, in the exercise of reasonable judgment by the Contractor, approximate the total amount at the time allotted to this contract. The Contractor shall not be obligated to continue performance of the work beyond such point.

(3) The Government shall not be obligated to reimburse the Contractor for costs incurred (including amounts payable in respect to subcontracts and termination settlement costs) and to pay any fixed fee to which the Contractor may be entitled, in excess of the total amount from time to time allotted to this contract. However, when and to the extent that the total amount allotted to his contract has been increased, any costs incurred by the Contractor and any fixed fee to which the Contractor may be entitled, prior to the increase and in excess of the amount previously allotted, shall be allowable to the same extent as if such costs had been incurred and fee earned after such increase in amount allotted.

(4) In the event funds allotted are considered by the Contractor to be inadequate to cover the work to be performed for the period set forth in the schedule, the Contractor shall notify the Contracting Officer in writing when within the next sixty (60) days the work will reach a point, at which, in the event of termination of this contract for the convenience of the Government pursuant to the clause of this contract entitled "Termination," the total amount paid and payable by the Government pursuant to a settlement including cost and fixed fee under Paragraph (e) of such clause will approximate seventy-five percent (75%) of the total amount then allotted

to the contract. The notice shall state the estimated date when such point will be reached and the estimated amount of additional funds required to continue performance for the period set forth in the schedule. The Contractor shall, sixty (60) days prior to the end of the period specified in the schedule, advise the Contracting Officer in writing as to the estimated amount of additional funds which will be required, on the basis of the obligation for performance in accordance with Paragraph (2) of this clause, for the timely performance of the work under the contract for such further period as may be specified in the schedule or otherwise agreed to by the parties. If, after such notification, additional funds are not allotted by the end of the period set forth in the schedule, or an agreed date in substitution therefor, the Contracting Officer will, upon written request of the Contractor, terminate this contract on such date, or on a date to be specified in such request, on which the Contractor, in the exercise of his reasonable judgment, estimates that he will have discharged his obligation to perform hereunder in accordance with Paragraph (2) of this clause, whichever is later, pursuant to the provisions of the clause of this contract entitled "Termination."

(5) When additional funds are allotted from time to time for continued performance of the work under this contract, the parties shall agree as to the applicable period of contract performance which shall be covered by such funds, and the provisions of Paragraph (2), (3), and (4) of this clause shall apply in like manner to such additional allotted funds and substituted date pertaining thereto, and the contract shall be amended accordingly.

(6) The Government may at any time prior to termination allot additional funds for this contract, and, with the consent of the Contractor, after notice of termination, may rescind such termination in whole or in part, and allot additional funds for this contract.

(7) In the event that sufficient amounts are not allotted to this contract to allow completion of the work contemplated by his contract, the Contractor shall be entitled, subject to the limitation of Paragraph (3) of his clause, to a percentage of the fixed fee set forth in the schedule equivalent to the percentage of completion of the work contemplated by this contract.

(8) Nothing in this clause shall affect the right of the Government to terminate this contract pursuant to the clause of this contract entitled "Termination."

(9) For the purposes of this clause the allotment or allotments specified in the schedule shall not be decreased without the consent of the Contractor.

(10) This clause shall be applicable and the clause of this contract entitled "Limitation of Cost" inapplicable until such time as an amount equal to the total estimated cost and fee set forth in the schedule is allotted to this contract, and thereafter the clause of this contract entitled "Limitation of Cost" shall be applicable and this clause inapplicable.

46 Alterations in Contract (JUL 1949)(ASPR 7-404.2, ASPR 7-105.1)

The following alterations have been made in the provisions of this contract:

[redacted]

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