

REPOSITORY Atlanta OARA  
 COLLECTION RG #326 (68-) UNITED STATES  
A1096 OR Research Div. ATOMIC ENERGY COMMISSION  
 BOX No. 554 LUMP SUM  
RESEARCH CONTRACT  
 FOLDER Southwestern Med.  
1960-on

Contract No. AT-(40-1)-2731

THIS CONTRACT, entered into this 27th day of May, 1960, by and between the UNITED STATES OF AMERICA (hereinafter called the "Government"), acting through the UNITED STATES ATOMIC ENERGY COMMISSION (hereinafter called the "Commission"), and THE UNIVERSITY OF TEXAS (SOUTHWESTERN MEDICAL SCHOOL) (hereinafter called the "Contractor");

WITNESSETH THAT:

WHEREAS, the Commission, in furtherance of its policy of assisting and fostering private research, desires to support the Contractor's fundamental research in the field of atomic energy; and

WHEREAS, this contract is authorized by and executed under the Atomic Energy Act of 1954;

NOW, THEREFORE, the parties hereto do mutually agree as follows:

ARTICLE I - SCOPE

1. The work shall consist of research involving the radiobiological significance of B-Aminosobutyric acid. The plan of approach to the problem and the agreed upon program and budget for the project are described in Appendix "A", which is hereby made a part of this contract. The Contractor shall be guided by, but not bound to conform to the details of, the budget described in Appendix "A".

2. The Contractor shall furnish all services, facilities, equipment, supplies and materials (except such services, equipment, supplies and materials as the Government has agreed to furnish herein) required for the performance of the research program described in section 1, above.

3. The work will be carried out by the Contractor under the direction of Dr. Joseph R. Rubini and Dr. Henry Lanz as Senior Investigators.

4. The Contractor shall commence the work as soon as feasible, prosecute it with due diligence and submit the reports required hereunder as early as practicable and not later than the dates specified in Appendix "C".

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*James Brown*  
 CONTRACTS - (2001979)

ARTICLE II - SCHEDULE

1. The period during which the work under the contract may be conducted shall end on April 30, 1961.

ARTICLE III

1. Consideration

a. In consideration of the performance of the research activities described in TITLE I of Appendix "A", and the Contractor's agreement to support that work in the estimated amount of Four Thousand, Nine Hundred Fifty-two Dollars (\$4,952.00), the Government shall pay to the Contractor Thirteen Thousand, Seven Hundred Twelve Dollars (\$13,712.00).

2. Payment

a. On or before the date of commencement of work on the project described in Appendix "A", the Government shall pay to the Contractor, upon submission by the Contractor of a proper voucher, 45 per cent of the agreed consideration.

b. On or before the expiration of six months from the date of commencement of the project, the Government shall pay to the Contractor, upon submission by the Contractor of a proper voucher, 45 per cent of the agreed consideration.

c. Upon receipt and acceptance of a satisfactory progress report, in cases where the contract is to be renewed, or the final report if the contract is not to be renewed, the Government shall pay to the Contractor, upon submission by the Contractor of a proper voucher, the remaining 10 per cent of the agreed consideration. An extension of the contract work without additional funds shall not be considered a renewal of the contract and in such cases the retained 10 per cent of the agreed consideration will be paid upon submission and acceptance of a satisfactory final report.

d. In the event the contract is renewed, payments to the Contractor of any additional amount to be paid by the Government shall be made for the extended work in accordance with the schedule outlined in subsections a., b., and c., above.

3. Contract Renewal

When renewal of the contract is desired, the Contractor shall submit to the Commission's Oak Ridge Operations Office a renewal proposal as outlined in Appendix "C" attached hereto. The Contractor and the Commission shall then negotiate as to the amounts each will contribute for the additional research activities to be conducted, taking into consideration the actual costs incurred for the current work in comparison with the cost estimates in the contract, and, upon agreement, shall execute a formal modification of the contract.

ARTICLE IV - REPORTS, RECORDS AND INSPECTION

1. The Commission shall have the right to inspect in such manner and at such times as it deems appropriate all activities of the Contractor arising in the course of the work under this contract.

2. The Commission shall at all times be afforded access to the premises and to all technical records, correspondence, instructions, drawings and memoranda of record value of the Contractor pertaining to said work.

3. The Contractor shall make progress and other reports in such manner and at such times as specified in Appendix "C" which is attached and hereby made a part of this contract.

4. Examination of Records

a. The Contractor agrees that the Comptroller General of the United States or any of his duly authorized representatives shall, until the expiration of three years after final payment under this contract, have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor involving transactions related to this contract.

b. The Contractor further agrees to include in all its subcontracts hereunder a provision to the effect that the subcontractor agrees that the Comptroller General of the United States 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 subcontract, involving transactions related to the subcontract. The term "subcontract" as used in this clause excludes

(1) purchase orders not exceeding \$2500; (2) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public; and (3) subcontracts or purchase orders for general inventory items not specifically identifiable with the work under this contract.

c. Nothing in this contract shall be deemed to preclude an audit by the General Accounting Office of any transaction under this contract.

#### ARTICLE V - PROPERTY

In consideration of the Contractor's contribution to the research project described in Appendix "A" of this contract, title to all materials, tools, machinery, equipment and supplies acquired from any source, including the Government, or manufactured by the Contractor under this contract, shall vest in the Contractor, except that title to items of property described in subsection 2. b. of Appendix "A" shall vest or remain in the Government. Additional items may be added to such subsection 2. b. in writing without the necessity for a formal modification of the contract.

#### ARTICLE VI - PROCUREMENT OF MATERIAL AND SERVICES FROM COMMISSION FACILITIES; COMPLIANCE WITH COMMISSION REGULATIONS

The Contractor shall comply with all licensing and other requirements of the Commission with respect to possession and use of by-product material, source material, and special nuclear material (as these terms are defined in the Atomic Energy Act of 1954), and may purchase or acquire such materials, irradiation services, other radioactive material, cyclotron time, etc., from the Commission or Commission facilities in accordance with applicable procedures.

#### ARTICLE VII - PURCHASE OF RADIOISOTOPES UNDER AN AEC DISCOUNT CERTIFICATE

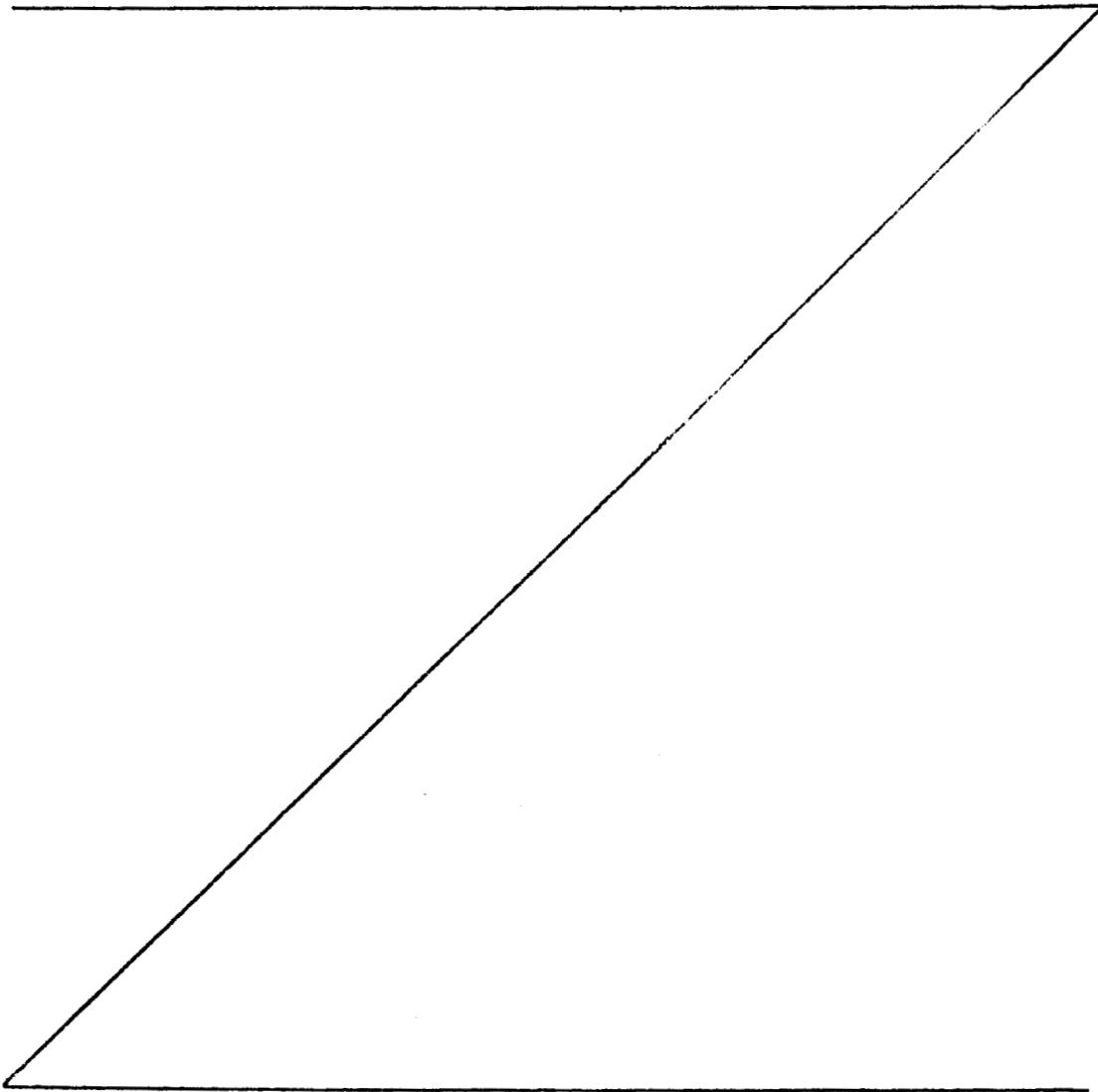
If any radioisotopes are budgeted in the outline of cost estimates at the full amount of the price as established by the Commission, but are purchased at less than such established prices under an AEC Discount Certificate issued to the Contractor (See: Title 10 C.F.R., Part 37) then any difference between the established price and the price so paid shall be paid by the Contractor to the Government or otherwise credited to the Government's account as the Contracting Officer may direct or approve. The requirement for a report to be submitted to the Commission indicating the purchases under the discount program is outlined in Appendix "C".

ARTICLE VIII - GENERAL PROVISIONS

The provisions of Appendix "B", attached hereto, are hereby made a part of this contract.

ARTICLE IX - ALTERATIONS

The following alterations to this contract were made by mutual agreement of the parties prior to its execution: None.



IN WITNESS WHEREOF, the parties hereto have executed this contract the day and year first above written.

UNITED STATES OF AMERICA

BY: UNITED STATES ATOMIC ENERGY COMMISSION

BY: /s/ Richard B. Martin  
(Contracting Officer)  
Acting Director  
Research and Development Division

WITNESSES:

/s/ Catherine Schulse  
3907 Throckmorton, Dallas  
(Address)

THE UNIVERSITY OF TEXAS  
(SOUTHWESTERN MEDICAL SCHOOL)

BY: /s/ A. J. Gill

/s/ Edwin A. Gell  
1633 Perryton, Dallas  
(Address)

TITLE: Dean

ACCEPTANCE BY SENIOR INVESTIGATORS

We have read the foregoing contract and the Appendices attached hereto and made a part hereof and agree to be bound by the provisions of this document.

/s/ Joseph R. Rubini, M. D.  
Senior Investigator

/s/ Henry Lums  
Senior Investigator

APPENDIX "A"

TITLE I

This TITLE I describes the research program and cost estimates agreed upon between the Commission and the Contractor.

1. PROGRAM

a. Scope and Plan of Approach:

The Contractor will attempt to evaluate the significance of urinary excretion of Beta- aminoisobutyric acid (BAIBA) following experimental total body irradiation and therapeutic local radiation therapy. BAIBA excretion as a chemical dosimeter to estimate total body irradiation will be evaluated. BAIBA excretion following local radiation therapy will be related to laboratory and clinical parameters in selected patients. Both human patients and dogs will be used. The following parameters will be examined: (1) level of BAIBA excretion in normal humans and dogs, (2) BAIBA excretion following graded doses of radiation as an indication of radiobiological damage and (3) BAIBA excretion in radiated tumor patients as a method of predicting the patients' response to radiation therapy.

2. BUDGET

a. Outline of Cost Estimates:

(1) <u>Salaries and Wages:</u>		\$ 7,020.00
Dr. J. R. Rubini	No Charge	
Dr. Henry Lanz	No Charge	
Consultants	\$3,000.00	
Research Technician	4,020.00	
(2) <u>Workman's Compensation and OASI:</u>		241.00
(3) <u>Equipment:</u>		6,250.00
(4) <u>Supplies:</u>		1,700.00
(5) <u>Publications:</u>		75.00
(6) <u>Travel:</u>		500.00
(7) <u>Indirect Costs</u> (41% of salaries and wages):		<u>2,878.00</u>
	TOTAL	\$18,664.00*

\*It is recognized that the project may receive additional support as outlined in the Contractor's proposal to the Commission.

- b. Items of property to be procured or manufactured by the Contractor, or to be furnished by the Government, title to which will vest or remain in the Government (see Article V): None

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## APPENDIX "B"

### GENERAL PROVISIONS

(FOR DIRECT AEC RESEARCH CONTRACTS)

#### 1. Patents

- a. Whenever any invention or discovery is made or conceived by the Contractor or its employees in the course of, in connection with, or under the terms of this contract, the Contractor shall furnish the Commission with complete information thereon; and the Commission shall have the sole power to determine whether or not and where a patent application shall be filed, and to determine the disposition of the title to and rights under any application or patent that may result. The judgment of the Commission on these matters shall be accepted as final; and the Contractor, for itself and for its employees, agrees that the inventor or inventors will execute all documents and do all things necessary or proper to carry out the judgment of the Commission.
- b. No claim for pecuniary award or compensation under the provisions of the Atomic Energy Acts of 1946 and 1954 shall be asserted by the Contractor or its employees with respect to any invention or discovery made or conceived in the course of, in connection with, or under the terms of this contract.
- c. Except as otherwise authorized in writing by the Commission, the Contractor will obtain patent agreements to effectuate the purposes of paragraphs a. and b. of this article from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will not have access to technical data.
- d. Except as otherwise authorized in writing by the Commission, the Contractor will insert in all subcontracts provisions making this article applicable to the subcontractor and its employees.

#### 2. Publications

It is intended that the Contractor shall have full freedom of publication of the results of the research under this contract and the Contractor is urged to disseminate the results of the work through customary scientific publication channels, except

that "restricted data" as defined in the Atomic Energy Act of 1954 shall be governed by the provisions of Paragraph 3. of this Appendix "B".

However, in order to insure that the public disclosure of such results will not adversely affect the patent interests of the Government provided in Paragraph 1. of this Appendix "B" entitled "Patents", approval for such release shall be secured from the Commission prior to any such publication.

All publications shall include a reference that the results were developed under a Commission sponsored project.

3. Security

- a. It is understood that the work under this contract will not involve restricted data or other classified matter and that the Contractor will perform such work as unclassified work. However, if in the course of such work any discoveries are made or any data used or developed that constitute restricted data or other classified matter, the Contractor shall promptly inform the Commission and will be bound by the following:
  - (1) Contractor's Duty to Safeguard Restricted Data and Other Classified Information. In the performance of the work under this contract the Contractor shall, in accordance with the Commission's security regulations and requirements, be responsible for safeguarding restricted data and other classified matter and protecting against sabotage, espionage, loss and theft, the classified documents, materials, equipment, processes, etc., as well as such other material of high intrinsic or strategic value as may be in the Contractor's possession in connection with performance of work under this contract. Except as otherwise expressly provided in the specifications the Contractor shall upon completion or termination of this contract transmit to the Commission any classified matter in the possession of the Contractor or any person under the Contractor's control in connection with performance of this contract.
  - (2) Regulations. The Contractor agrees to conform to all security regulations and requirements of the Commission.

- (3) Definition of Restricted Data. The term "Restricted Data", as used in this article, means all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 1142 of the Atomic Energy Act of 1954.
- (4) Security Clearance of Personnel. Except as the Commission may authorize, in accordance with the Atomic Energy Act of 1954, the Contractor shall not permit any individual to have access to Restricted Data until the designated investigating agency shall have made an investigation and report to the Commission on the character, associations, and loyalty of such individual and the Commission shall have determined that permitting such person to have access to Restricted Data will not endanger the common defense and security. As used in this paragraph, the term "designated investigating agency" means the United States Civil Service Commission or the Federal Bureau of Investigation, or both, as determined pursuant to the provisions of the Atomic Energy Act of 1954.
- (5) Criminal Liability. It is understood that disclosure of information relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any Restricted Data or any top secret, secret, or confidential matter that may come to the Contractor or any person under the Contractor's control in connection with work under this contract, may subject the Contractor, its agents, employees, and subcontractors to criminal liability under the laws of the United States. (See the Atomic Energy Act of 1954, 68 Stat. 919), (See also Executive Order 10104 of February 1, 1950, 15 F.R. 597).
- (6) Subcontracts and Purchase Orders. Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall insert provisions similar to the foregoing in all subcontracts and purchase orders under this contract.

- b. The continuation by the Contractor of work found to involve restricted data will be subject to mutual agreement of the Commission and the Contractor and shall be covered by a modification of this agreement.

4. Disputes

- 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 Commission. The decision of the Commission or its 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 fraudulent, 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 its appeal. Pending final decision of a dispute hereunder, the Contractor 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.

5. Safety, Health and Fire Protection

The Contractor shall take all reasonable precautions in the performance of the work under this contract to protect the health and safety of employees and members of the public and to minimize danger from all hazards to life and property, and shall comply with all health, safety, and fire protection regulations and

requirements (including reporting requirements) of the Commission. In the event that the Contractor fails to comply with said regulations or requirements of the Commission, the Contracting Officer may, without prejudice to any other legal or contractual rights of the Commission, issue an order stopping all or any part of the work; thereafter a start order for resumption of work may be issued at the discretion of the Contracting Officer. The Contractor shall make no claim for an extension of time or for compensation or damages by reason of or in connection with such work stoppage.

6. Officials Not to Benefit

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.

7. Covenant Against Contingent Fees

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.

8. Convict Labor

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

9. Termination

- a. The Commission may at any time upon 120 days' written notice terminate this contract in whole or in part.

- b. In the event of termination pursuant to subsection a., the Contractor shall submit a statement of costs incurred in performance of the work under the contract prior to such termination, and the Government shall pay to the Contractor that portion of the costs incurred which bears the same relationship to the total as the agreed Government support for the full term bears to the total of cost estimates for the full term, less the amount of all payments theretofore made. If the total payments theretofore made to the Contractor exceed the amount to which it is entitled hereunder, the Contractor shall promptly remit the amount of any such excess to the Government.

10. Eight-Hour Law

- a. No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Contractor or any subcontractor contracting for any part of said work contemplated, shall be required or permitted to work more than eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this article. The wages of every laborer and mechanic employed by the Contractor or any subcontractor engaged in the performance of this contract shall be computed on a basic day rate of eight hours per day and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. For each violation of the requirements of this article a penalty of five dollars shall be imposed upon the Contractor for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this article, and all penalties thus imposed shall be withheld for the use and benefit of the Government: Provided, That this stipulation shall be subject in all respects to the exceptions and provisions of the Eight-Hour Laws as set forth in 40 U.S.C. 321, 324, 325, 325a and 326, which relate to hours of labor and compensation for overtime.
- b. This provision does not apply to work performed by employees of the Contractor if this contract is with a state or a state institution.

- b. In the event of termination pursuant to subsection a., the Contractor shall submit a statement of costs incurred in performance of the work under the contract prior to such termination, and the Government shall pay to the Contractor that portion of the costs incurred which bears the same relationship to the total as the agreed Government support for the full term bears to the total of cost estimates for the full term, less the amount of all payments theretofore made. If the total payments theretofore made to the Contractor exceed the amount to which it is entitled hereunder, the Contractor shall promptly remit the amount of any such excess to the Government.

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- a. No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Contractor or any subcontractor contracting for any part of said work contemplated, shall be required or permitted to work more than eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this article. The wages of every laborer and mechanic employed by the Contractor or any subcontractor engaged in the performance of this contract shall be computed on a basic day rate of eight hours per day and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. For each violation of the requirements of this article a penalty of five dollars shall be imposed upon the Contractor for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this article, and all penalties thus imposed shall be withheld for the use and benefit of the Government: Provided, That this stipulation shall be subject in all respects to the exceptions and provisions of the Eight-Hour Laws as set forth in 40 U.S.C. 321, 324, 325, 325a and 326, which relate to hours of labor and compensation for overtime.
- b. This provision does not apply to work performed by employees of the Contractor if this contract is with a state or a state institution.

11. Nondiscrimination in Employment

- a. In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, color or national origin. The aforesaid provision 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 hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of the nondiscrimination clause.
- b. The Contractor further agrees to insert the foregoing provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

12. Definitions

As used in this contract:

- a. The term "Contracting Officer" means the person executing this contract on behalf of the Government and includes his successor or any duly authorized representative of such person.
- b. The term "Commission" means the United States Atomic Energy Commission or any duly authorized representative thereof, including the Contracting Officer except for deciding an appeal under the article entitled "Disputes".

13. Fellowships

It is understood by the Contractor that none of the funds supplied by the Commission under this contract shall be used in any way to pay the stipend of any appointment for which commensurate services are not rendered under this contract; nor shall any of the funds be used to confer a fellowship, or to pay any part of the stipend of a fellowship, of any kind.

14. Foreign Travel

It is agreed that none of the funds supplied by the Commission under this contract shall be used to pay the expenses of foreign travel, except where such foreign travel is made with the prior approval of the Commission. "Foreign travel" as used herein means travel outside the continental United States, excepting, however, travel to Canada.

15. Buy American Act

In the event this contract provides for the acquisition of articles, materials, or supplies by the Government, the following provision shall apply with respect to such items: The Contractor agrees that there will be delivered under this contract only such unmanufactured articles, materials and supplies (which term "articles, materials and supplies" is hereinafter referred to in this clause as "supplies") as have been mined or produced in the United States, and only such manufactured supplies as have been manufactured in the United States substantially all from supplies mined, produced, or manufactured, as the case may be, in the United States. The foregoing provisions shall not apply (i) with respect to supplies exempted by the Commission from the application of the Buy American Act (41 U.S.C. 10a-d), (ii) with respect to supplies for use outside the United States, or (iii) with respect to the supplies to be delivered under this contract which are of a class or kind determined by the Commission not to be mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, or (iv) with respect to such supplies, from which the supplies to be delivered under this contract are manufactured, as are of a class or kind determined by the Commission not to be mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, provided that this exception (iv) shall not permit delivery of supplies manufactured outside the United States if such supplies are manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality.

16. Placing Orders and Subcontracts with Firms Located in Areas of Substantial Labor Surplus

It is the policy of the Government to place supply contracts with suppliers who will perform such contracts substantially in

areas of current labor surplus where this can be done at prices no higher than are obtainable elsewhere. The Contractor agrees to use its best efforts to place its contracts and purchase orders in accordance with this policy to the extent consistent with the efficient performance of this contract.

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APPENDIX "C"

REPORTS AND PROPOSALS  
(FOR DIRECT AEC RESEARCH CONTRACTS)

	Date Due	Copies
1. Progress Report	<u>FEB 1</u>	Six
2. Renewal Proposal	<u>FEB 1</u>	Six
3. 200-word summary of purpose and scope with submittal date indicated thereon	Within thirty days after <u>MAY 1</u>	Three
4. Complete Scientific Report	On contract expiration or termination	Six
5. Radioisotopes Purchase Report	With renewal proposal if proposal is submitted, otherwise on contract expiration	Three
6. Brief reports or manuscripts may be submitted as desired by Senior Investigator		

NOTES:

All of the above should be addressed to:

Research and Development Division  
Oak Ridge Operations Office  
U. S. Atomic Energy Commission  
Post Office Box E  
Oak Ridge, Tennessee

The progress report should briefly describe the scope of investigations undertaken and the significant results obtained. It should also explain any significant differences between the actual level of activity (expressed in the various categories of man months, facilities procured, travel performed, etc.) and that contemplated in the contract. Technical reports and articles prepared for publication should be listed with bibliographic references. Reprints or preprints of all such material should be appended and material contained therein need not be duplicated in the report.

Renewal proposals, if any, should accompany the progress report and should contain the type of information outlined below unless the information is already contained in earlier proposals or in the accompanying progress report. Any contemplated change in program or scope for the additional work should be clearly explained and the cost estimated should be based upon past experience.

1. Title of the project.
2. The institution and department in which the work will be done.
3. Scientific background including literature relevant to the proposal, the significance, and the motivation. If the proposal is for continuation of work already in progress the extent of present support should be stated identifying amounts received from other federal agencies.
4. Scientific scope of the proposed research, its objectives, its relation to present knowledge and to comparable work in progress elsewhere, and a plan of accomplishments for the work.
5. Scientific Personnel. Give the name, highest academic degree, position in the institution, scientific experience, publications and accomplishments of the Senior Investigator (the individual who will actively direct the research program) and of each regular staff scientist who it is proposed will engage in the work. Indicate the approximate fraction of the time of each to be devoted to the project. Scientific personnel to be newly employed for the project should be so designated, and professional records given if possible.
6. Other Personnel. The number of persons of each sub-professional grade and the fraction of the time of each to be devoted to the project should be listed. Graduate student employees should be identified as such if their thesis is to be related to the project.
7. Other Financial Assistance. If assistance for this or other activities involving the same personnel or facilities is to be proposed to or received from other federal or non-university sources the extent of that assistance should be clearly stated, and the interplay of the arrangements should be fully explained.
8. Materials, Equipment and Facilities. List those already available for the work and justify the need for major items to be procured.
9. Travel and Other Items. Explain the purpose of the proposed travel, and of any other major items in the budget. Travel rates and the use of contract funds for attendance at regular scientific meetings should conform with the policy of the institution in the use of its own funds for these purposes.

10. Budget. This should list in detail all items of cost necessary to carry the project. It should include: a list of the individual salaries attributable to the project, supplies and services, equipment (defined as things individually costing more than \$500 which will retain their utility for more than a year), travel, communication and publication, and the indirect costs allocable to the project. The basis for computing the indirect costs should be briefly explained. The budget should not include the stipend of fellows. All salaries chargeable to the project should be in accord with the established policies of the institution, or, if not, an explanation should be submitted.
11. Amount Requested. A statement of the part of the total amount listed in the budget which the institution is prepared to bear, and the amounts requested from the AEC, and a statement of any other sponsors of the project with the amounts contributed by each. The proposal should be signed by the Senior Investigator and endorsed by a responsible administrative officer of the institution.
12. Statement of Current Expenditures. A current statement of its expenditures for the project, and an estimate of expenses to be incurred.
13. Residual Funds. Any difference in the scope of the work from that contemplated in the contract, as brought out in the report, may be reflected in the amount requested. If no new funds are required the contract may be renewed without funds. A proposal for such renewal should state the scope of the work proposed for use of residual funds.

The radioisotopes purchase report shall list all radioisotopes included in the budget at the regular price established by the Commission, but which are purchased, or will be purchased under the current budget, at a price less than the established price by utilizing the discount authorized by an AEC Discount Certificate issued to the Contractor. For each such purchase, the report shall state the price as established by the Commission, the price paid or to be paid using the discount, and the savings realized or to be realized. The report due on contract termination or expiration shall cover all such purchases actually made and not previously reported.