OPTIONAL FORM NO. 10
5010-104

UNITED STATES GOVERNMENT

Memorandum

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TO : C. L. Dunham, Director
Division of Biology and Medicine, HQ

DATE: July 6, 1965

FROM : S. R. Sapirie, Manager
Oak Ridge Operations

SUBJECT: ORINS PROPOSED MEDICAL DIVISION SCIENCE BUILDING

OR:KMH

In declining to provide a matching grant to the ORINS Corporation for construction of new and enlarged medical research facilities on the ORINS site, NIH and NSF indicated their decision was based primarily on their feeling that construction of facilities to be used in major part for AEC program work should more properly be funded by the AEC. As a result of this position of NIH and NSF and subsequent discussions between ORINS and yourself, ORINS has proposed AEC construction of a major facility addition at the present site of the Medical Division.

In support of this proposal, ORINS has submitted the enclosed preliminary construction project data sheet for construction in the area east of the D-wing of a three story, 33,000 gross square foot building at an estimated cost of $1,150,000. The information submitted by ORINS is insufficient for even a general engineering evaluation of their outline plans and estimated costs. A satisfactory description of the facility addition and estimated cost can only be developed through a conceptual design study. We are, therefore, forwarding the enclosed data sheet only to document the general proposal for eventual AEC construction and not as an ORO FY 1967 budget proposal.

It is our understanding that you have indicated to ORINS the possibility of AEC support for additional facilities in the FY 1968 - FY 1970 time period. We, therefore, recommend that a conceptual design study be performed during FY 1966 to define the facility requirements and estimated costs based on your future program planning guidance. We would expect this study to be funded out of the FY 1966 budget level you authorized for the Cancer Research Program.

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FOLDER ORAU General Correspondence

New Pending
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Prior to initiation of a conceptual design study, we would appreciate your guidance on the level of program expansion that would be appropriate for facility expansion. The proposed new facility would replace 6,918 net sq. ft. of space occupied at the preclinical facilities near UT-AEC. The outright increase in net area for program activities would be about 13,000 sq. ft. Excluding special purpose facilities such as for patient care and treatment, general administration, whole body counter and irradiation, a total of approximately 20,000 net sq. ft. is now devoted to the various research type activities. The ORINS proposed building would, therefore, result in a facility expansion of about 65%. Some of this additional space will be required to provide more adequate facilities for current activities. Thus, it may be estimated that the ORINS proposal would provide for expansion of research type facilities by about 50%.

Please advise if you concur in having a conceptual design study made during FY 1966 to define the scope and estimated cost of the proposed facilities and provide program guidance indicating the general level of program growth you would consider reasonable for facility planning purposes. This growth would be provided for in the new facility in addition to the replacement space for the present preclinical facilities.

S. R. Saptrie

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Enclosure:
Data Sheet (4)

CC: R. C. Armstrong, w/encl.
L. H. Jackson, w/encl.
N. A. Shearon, w/encl.
H. M. Roth, w/encl.

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PRELIMINARY

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OAK RIDGE INSTITUTE OF NUCLEAR STUDIES

FY 1967 Budget

PRELIMINARY

Schedule 44

Construction Project Data Sheet

Subprogram: Cancer Research

1. Title and Location of Project: Medical Division Science Building
Medical Division, ORINS

2. Project No. 67-1

	Qtr.	F.Y.		
3. A-E Initiated:	1	1967	5. Previous Cost Estimate:	6. Current Cost Estimate:
3a. Construction Starts:	2	1967	$ None	$ 1,150,000
4. Construction Ends:	3	1968	Date:	Date: June 1965

7. Obligation and Cost Schedule:

Fiscal Year	Obligations	Costs
1966	$ 10,000	$ 10,000
1967	1,140,000	570,000
1968	--	570,000
		$1,150,000

8. Brief Physical Description of Project:

This project involves the construction of a three story research building presently planned for the area betwee the upper and lower parking lots just to the east of the "D" wing of the Medical Division complex. The structu approximately 50 feet wide and 220 feet long and oriented in an east-west direction, will join or be connected by a covered walkway to the "D" wing. The building, constructed of masonry with precast floors, will contain about 11,000 gross square feet on each floor, or a total of 33,000 gross square feet. The net floor space will approximate 20,000 square feet. The entrance to the building will be from the parking lot on the south side. The service entrance will be at the east end. Additional parking space will also be developed at this end of the building. Electricity, water and sewer lines will be connected to lines serving existing Medical Division buildings. Underground tanks are to be installed for the disposal of radioactive wastes or lines will be run to the tanks located south of the "E" building. Steam for heating will be purchased from the Oak Ridge Hospital of the Methodist Church. A study, however, will be made of the economics involved in installing a steam generating plant to serve the entire Medical Division complex.

9. Justification of Need:

1. A major portion of the research of the Medical Division is carried out in four buildings located about 4-1/2 miles from the main facilities of the Division. The buildings are partly of temporary construction

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1. Title and Location of Project: Medical Division Science Building, Medical Division, ORINS

2. Project No. 67-1

9. Justification of Need: - continued

and have been renovated and adapted to program needs. Fixed equipment had to be adjusted to the limited existing space and movable equipment has been fitted into the remaining space. The programs currently carried out in these buildings are: (1) Lipids Metabolism as Influenced by Radiation (2) Metals Metabolism and Medical Radionuclides and (3) Experimental Radiotherapy. The lack of integrated design, substandard construction and crowded working conditions combined with the wide physical separation from the main facilities make for a costly and ineffective operation.

While the crowded space situation and unsatisfactory equipment arrangement seriously limit the effectivenes of the professional staff the greatest shortcoming of the facilities lies in the area of animal care. The needs of the program have changed in recent years, with more emphasis on work in experimental animals. Recent developments in projects and techniques require that the animals be kept in an optimum environment; and standards for laboratory care of animals have risen greatly throughout the country. The present facilities fail to meet the recommendations set by the Animal Facilities Standards Committee of the Animal Care Panel of the U. S. Department of Health, Education, and Welfare. This deficiency has been critically pointed out by two separate review committees.

The new building would provide animal quarters designed to (1) prevent cross-contamination and the spread of infection and (2) provide a controlled temperature and humidity environment. A total of 10,000 square feet has been allocated to animal care and central facilities in the new building. This contrasts with 3,606 square feet used for the same purposes in the four buildings currently being used for preclinical research.

Because of the inadequacy of present facilities accurate results in thin layer chromotography in the lipids program are not obtainable due to dust in the recirculated air. Human cell cultures in the immunology program and autoradiographic methods used in metals metabolism both require a more controlled environment than can be obtained in the present facilities. Facilities for solvent extractions, not now available, would be provided in the new structure.

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1. Title and Location of Project: Medical Division Science Building, Medical Division, ORINS

2. Project No. 67-1

9. Justification of Need: - continued

The present 60 cobalt irradiator used for animal studies has an unsatisfactory beam and too low a dose rate. A better instrument cannot be utilized without a more adequately shielded room. The congested situation would be ameliorated by raising the working space by the following amounts: (1) Lipids metabolism from 2,254 to 3,000 square feet (2) Experimental Radiotherapy from 597 to 1,000 square feet (3) Immunology from 1,006 to 2,000 square feet.

In general, the new building would achieve the following: (1) more space for the programs housed in the present preclinical research buildings would be provided (2) the substandard animal care facilities would be raised to the optimum and, (3) the professional staff would be provided a work environment permitting the use of the most accurate and highly refined research techniques.

2. The new building would permit program growth which is now impossible because of overtaxed facilities. Research in new areas is vital in enabling the Division to carry out its mission. This research has been on the forward planning schedule for several years. Three new programs requiring 4,500 square feet plus approximately 3,000 additional square feet in animal care and central facilities will be housed in the new facility. These activities are electron microscopy (1,000 square feet), experimental hemotology (2,000 square feet), and veterinary support for projects involving animal studies (1,500 square feet).

3. The daily delivery of animals to and from the present animal laboratories would be eliminated. The proximity of the professional staff engaged in laboratory research activities would make possible a maximum of exchange of information through consultation and collaboration with staff members engaged in related research. The location of the new science building nearer to the hospital and other laboratory facilities would eliminate many disadvantages associated with the present location of the animal research facilities.

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OAK RIDGE INSTITUTE NUCLEAR STUDIES

PRELIMINARY

Construction Project Data Sheet
(Page 4)

Schedule 44

Subprogram: Cancer Research

1. Title and Location of Project: Medical Division Science Building, Medical Division, ORINS

2. Project No. 67-1

10. Details of Cost Estimate:

ORINS Participation:

Title I	- Engineering	$ 10,000
Title II	- Review Architect's Plans and Specifications	3,000
Title III	- Construction Inspection	3,000
Title III	- Moving Fixed Equipment	10,000
	Total	$ 26,000

1.	Site Preparation	$ 5,000
2.	Building Construction	782,000
3.	Fixed Equipment	150,000
4.	Architect Engineering	81,000
5.	ORINS Participation	26,000
	Project Subtotal	$1,045,000
	Project Contingency - 10%	105,000
	Project Total	$1,150,000

11. Major Contractors and Intended Type of Contract:

Title I - ORINS proposes to make the Title I engineering study.

Title II - Drawings and specifications required under Title II would be handled by a local architect firm working under the direction of ORINS.

Title III - Construction would be carried out by a contractor selected by AEC. Inspection work would be performed by the Institute.

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