

SUMMARY OF OPERATIONS ON CONTRACT NO. W-28-094-eng-33  
FOR THE MONTH OF MAY 1947

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During the month of May it was again necessary for all members of the staff in "Applied Fisheries" to devote almost all of their energies to the conduct of the experimental work, rather than to the analysis of data previously gathered.

I. The basic program of the Applied Fisheries Laboratory at the University of Washington, that of measuring the effect of exposure of aquatic organisms in various stages of development to X-rays, was continued on schedule.

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\*Sections I and II.

The study being made of the second generation of young fish from the "controls" and the 100 r exposures was terminated. These fish have been retained for their normal length of feeding period in fresh water and so were liberated to migrate to sea to continue their development. They were not marked for subsequent identification for it was felt that the numbers were too few and no marks were available. This study should be resumed in the fall of 1947 when it is assumed the major portion of the run will return from the sea to spawn.

A sample of 100 fish was preserved from each of the four lots in the section. These fish will be subjected to close study to record in as much detail as possible the differences from the normal of the offspring of parent fish produced from parents treated with 100 r total body irradiation with X-rays.

\*Section numbers refer to the Project Chronology Chart, revised January 9, 1947.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY: <i>A.P. Domingallo 11-2-94</i>	DETERMINATION (CIRCLE NUMBER(S)) 1. CLASSIFICATION RETAINED 2. CLASSIFICATION CHANGED TO: 3. CONTAINS NO DOE CLASSIFIED INFO 4. COORDINATE WITH: 5. CLASSIFICATION CANCELLED 6. CLASSIFIED <del>ALL</del> DECLASSIFIED 7. OTHER (SPECIFY):
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Section XI-b

The actual experimental work in this section has occupied almost the entire attention of the staff during the month. The adult fish, the progeny of irradiated or "control" parents, continued to spawn. A total of 298 egg lots have been obtained and the eggs started to develop. The eggs when removed from the females and fertilized with the spawn of males of like irradiation experience have been retained in individual compartments during the incubation period and the absorption of the yolk sac. During this period the numbers of eggs and fry to die during each stage of development was recorded. The numbers and kind of malformations were also determined.

The great numbers of young fish produced in the project made it necessary to reduce the numbers retained, once they reached the feeding stage. Portions of each lot were retained to make a total sample of 4000, for the control lots, 2000 for each of the 50 r, 100 r, 500 r, and 750 r lots and 654 for the 1000 r lots. Only a total of 654 fry survived from the eggs of the adult fish from parents exposed to 1000 r prior to spawning in the spring of 1945. The samples being retained of the young fish are being studied for the effects of irradiation on the 3rd generation during the feeding stages.

Sections XV-XVII

Two adult fish, one male and one female, returned to the Leavenworth Station, during the month after two year absence, during which they migrated to sea, fed for a time and returned up the Columbia River, entered the Wenatchee River, and finally turned into the Leavenworth holding ponds on Icicle Creek.

These fish were spawned and their resulting eggs are being cared for by the U. S. Fish and Wildlife Service, with the data on the progress of the development being furnished to this laboratory.

II. Studies on the absorption and retention of radioactive materials were continued but at a reduced scale. A scale 64 Victoreen counter No. X-327 was obtained and has been put into a workable condition.

III. The proposed follow-up studies of the Bikini Lagoon for the summer of 1947 have been taking more definite form. Equipment and personnel are being assembled to carry out this work.

IV. The resumption of telephone service has made it possible to again follow in closer detail the progress of the program at the 146 Building, Hanford Engineering Works.

A visit was made to the Hanford Engineering Works by Dr. L. R. Donaldson on May 20, to study developments and to confer with the men in charge of the operations of the laboratories.

Mr. Mountford, Security Officer of Hanford Engineering Works visited the Applied Fisheries Laboratory on May 7.

Dr. Stafford L. Warren, Chairman, Interim Medical Committee, Atomic Energy Commission visited the Laboratories on May 24 to confer with staff members and to study the development of the various phases of the project.

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 Director of Contract  
 No. W-28-0 94-eng-33

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