

DL&R:NDM

React. Nos. 50-174 *AMW*

NOV 29 1960

The Pennsylvania State University
University Park, Pennsylvania

Attention: Dr. E. F. Osborn
Vice President for Research

Gentlemen:

Transmitted herewith is License No. R-72, which authorizes The Pennsylvania State University to possess, but not to operate, the nuclear research reactor facility at the Curtiss-Wright Research and Development Center at Quehanna, Pennsylvania.

Also enclosed are a Notice of Issuance of Facility License, which has been submitted to the Office of the Federal Register for filing and publication, a related hazards analysis prepared by the Research and Power Reactor Safety Branch of the Division of Licensing and Regulation and a notice of termination of License No. R-36 issued to Curtiss-Wright Corporation.

Distribution

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- D. C. Clark, IS
- P. A. Morris, Compl. (2)
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- H. Steele, L&R
- Doc. Rm.

Sincerely yours,

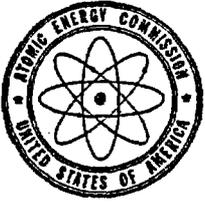
Formal Director
Suppl. Division of Licensing and Regulation

LB reading L&R reading NDMason

- Enclosures:
1. License No. R-72
 2. Notice of Issuance of Facility License No. R-72
 3. Hazards Analysis
 4. Notice of Termination of Facility License No. R-36

file 11/28
B/S

OFFICE ▶	DL&R	DL&R	DL&R	DL&R	DL&R	OGC
SURNAME ▶	NDMason/vj	ERFleury	LJohnson	R L Kirk Director	Case	M.A.
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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

THE PENNSYLVANIA STATE UNIVERSITY

DOCKET NO. 50-174

L I C E N S E

License No. R-72

1. This license applies to the light water-moderated and -cooled swimming pool-type nuclear reactor facility (hereinafter referred to as "the facility") which is located at Quehanna, Pennsylvania, and which has heretofore been owned by the Curtiss-Wright Corporation, and previously operated under License No. R-36. The facility is described in The Pennsylvania State University's application dated September 29, 1960, and amendment thereto dated November 2, 1960, (hereinafter together referred to as "the application").
2. Pursuant to the Atomic Energy Act of 1954, as amended, (hereinafter referred to as "the Act") and having considered the record in this matter, the Atomic Energy Commission (hereinafter referred to as "the Commission") finds that:
 - A. The facility has been constructed in conformity with Construction Permit No. CRR-11 issued to Curtiss-Wright Corporation;
 - B. There is reasonable assurance that the facility can be possessed at the designated location without endangering the health and safety of the public;
 - C. The Pennsylvania State University is technically and financially qualified to possess the facility, to assume financial responsibility for payment of Commission charges for special nuclear material and to undertake and carry out the proposed activities in accordance with the Commission's regulations;
 - D. The possession of the facility and the receipt and possession of the special nuclear material in the manner proposed in the application will not be inimical to the common defense and security or to the health and safety of the public.
3. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses The Pennsylvania State University:
 - A. Pursuant to Section 104c of the Act and Title 10, CFR, Chapter 1, Part 50, "Licensing of Production and Utilization Facilities", to possess, but not to operate, the facility as a utilization facility at the designated location at Quehanna, Pennsylvania, in accordance with the procedures and limitations described in the application and this license;

- B. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 70, "Special Nuclear Material", to receive and possess up to 10 kilograms of contained uranium 235 and 14.99 grams of plutonium contained in a plutonium-beryllium source for use in connection with future operation of the facility; and
 - C. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 30, "Licensing of Byproduct Material", to possess but not to separate such byproduct material as was produced by previous operation of the reactor.
4. This license shall be deemed to contain and be subject to the conditions specified in Section 50.54 of Part 50 and Section 70.32 of Part 70, Title 10, Chapter 1, CFR, and to be subject to all applicable provisions of the Act, and to the rules and regulations and orders of the Commission, now or hereafter in effect, and to the additional conditions specified below:
- A. The Pennsylvania State University shall not operate the reactor.
 - B. The fuel elements shall not be moved from their present locations unless procedures for transferring these elements have been reviewed and approved by the Commission.
 - C. In addition to those otherwise required under this license and applicable regulations, The Pennsylvania State University shall keep the following records:
 - 1. Records showing radioactivity released or discharged into the air or water beyond the effective control of The Pennsylvania State University as measured at the point of such release or discharge.
 - D. The Pennsylvania State University shall immediately report to the Commission in writing any indication or occurrence of a possible unsafe condition relating to the possession of the reactor.
5. This license is effective as of December 12, 1960, and shall expire at midnight December 12, 1962.

FOR THE ATOMIC ENERGY COMMISSION

E. L. RICE
Deputy Director
Division of Licensing & Regulation

Date of Issuance: NOV 29 1960

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-174

THE PENNSYLVANIA STATE UNIVERSITY

NOTICE OF ISSUANCE OF FACILITY LICENSE

Please take notice that the Atomic Energy Commission has issued Facility License No. R-72, set forth below, authorizing The Pennsylvania State University to possess, but not to operate, the nuclear research reactor facility at the Curtiss-Wright Research and Development Center at Quehanna, Pennsylvania, which has heretofore been owned by the Curtiss-Wright Corporation, and previously operated under License No. R-36. Ownership of the facility will be transferred to the University upon the receipt of this license and the official name of the facility is to be The Curtiss-Wright Nuclear Research Laboratory of The Pennsylvania State University. The license, which becomes effective on December 12, 1960, also authorizes the possession of source and special nuclear material in connection with the eventual operation of the reactor.

The Commission has found that possession of the facility in accordance with the terms and conditions of the license will not present an undue hazard to the health and safety of the public and will not be inimical to the common defense and security.

The Commission has found that prior public notice of proposed issuance of this license is not necessary since the proposed possession of the facility does not present any substantial changes in the hazards to the health and safety of the public from those previously considered and approved in connection with the shutdown and maintenance of the facility on a stand-by basis.

In accordance with the Commission's "Rules of Practice" (10 CFR 2) the Commission will direct the holding of a formal hearing on the matter of the issuance of the license upon receipt of a request therefor from the licensee or an intervener within thirty days after issuance of the license. Petitions for leave to intervene shall be filed by mailing a copy to the Office of the Secretary, Atomic Energy Commission, Washington 25, D. C., or by delivery of a copy in person to the Office of the Secretary, Germantown, Maryland, or the AEC's Public Document Room, 1717 H Street, Washington, D. C. For further details see (1) the application for license dated September 29, 1960 and amendment thereto dated November 2, 1960 submitted by The Pennsylvania State University, and (2) a hazards analysis of the proposed possession prepared by the Research and Power Reactor Safety Branch of the Division of Licensing and Regulation, both on file at the AEC's Public Document Room. A copy of item (2) above may be obtained at the AEC's Public Document Room or upon request addressed to the Atomic Energy Commission, Washington 25, D. C., Attention: Director, Division of Licensing and Regulation.

FOR THE ATOMIC ENERGY COMMISSION

R. L. Kirk
Deputy Director
Division of Licensing & Regulation

Dated at Germantown, Maryland
this day of , 1960.

NOV 29 1960

THE PENNSYLVANIA STATE UNIVERSITY

DOCKET NO. 50-174

L I C E N S E

License No. R-72

1. This license applies to the light water-moderated and -cooled swimming pool-type nuclear reactor facility (hereinafter referred to as "the facility") which is located at Quehanna, Pennsylvania, and which has heretofore been owned by the Curtiss-Wright Corporation, and previously operated under License No. R-36. The facility is described in The Pennsylvania State University's application dated September 29, 1960, and amendment thereto dated November 2, 1960, (hereinafter together referred to as "the application").
2. Pursuant to the Atomic Energy Act of 1954, as amended, (hereinafter referred to as "the Act") and having considered the record in this matter, the Atomic Energy Commission (hereinafter referred to as "the Commission") finds that:
 - A. The facility has been constructed in conformity with Construction Permit No. CPRR-11 issued to Curtiss-Wright Corporation;
 - B. There is reasonable assurance that the facility can be possessed at the designated location without endangering the health and safety of the public;
 - C. The Pennsylvania State University is technically and financially qualified to possess the facility, to assume financial responsibility for payment of Commission charges for special nuclear material and to undertake and carry out the proposed activities in accordance with the Commission's regulations;

- D. The possession of the facility and the receipt and possession of the special nuclear material in the manner proposed in the application will not be inimical to the common defense and security or to the health and safety of the public.
3. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses The Pennsylvania State University:
- A. Pursuant to Section 104c of the Act and Title 10, CFR, Chapter 1, Part 50, "Licensing of Production and Utilization Facilities", to possess, but not to operate, the facility as a utilization facility at the designated location at Quehanna, Pennsylvania, in accordance with the procedures and limitations described in the application and this license;
- B. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 70, "Special Nuclear Material", to receive and possess up to 10 kilograms of contained uranium 235 and 14.99 grams of plutonium contained in a plutonium-beryllium source for use in connection with future operation of the facility; and
- C. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 30, "Licensing of Byproduct Material", to possess but not to separate such byproduct material as was produced by previous operation of the reactor.
4. This license shall be deemed to contain and be subject to the conditions specified in Section 50.54 of Part 50 and Section 70.32 of Part 70, Title 10, Chapter 1, CFR, and to be subject to all applicable provisions of the Act, and to the rules and regulations and orders of the Commission, now or hereafter in effect, and to the additional conditions specified below:

- A. The Pennsylvania State University shall not operate the reactor.
 - B. The fuel elements shall not be moved from their present locations unless procedures for transferring these elements have been reviewed and approved by the Commission.
 - C. In addition to those otherwise required under this license and applicable regulations, The Pennsylvania State University shall keep the following records:
 - 1. Records showing radioactivity released or discharged into the air or water beyond the effective control of The Pennsylvania State University as measured at the point of such release or discharge.
 - D. The Pennsylvania State University shall immediately report to the Commission in writing any indication or occurrence of a possible unsafe condition relating to the possession of the reactor.
5. This license is effective as of December 12, 1960, and shall expire at midnight December 12, 1962.

FOR THE ATOMIC ENERGY COMMISSION

R. L. Kirk
Deputy Director
Division of Licensing & Regulation

Date of Issuance: NOV 29 1960

UNITED STATES ATOMIC ENERGY COMMISSION

HAZARDS ANALYSIS BY THE RESEARCH & POWER REACTOR SAFETY BRANCH

IN THE MATTER OF

POSSESSION OF THE CURTISS-WRIGHT NUCLEAR RESEARCH REACTOR (CWRR)

BY THE PENNSYLVANIA STATE UNIVERSITY

DOCKET NO. 50-174

In an application dated September 29, 1960 and amendment thereto dated November 2, 1960, The Pennsylvania State University requested that the U. S. Atomic Energy Commission grant the University a Class 104-c license to possess, but not to operate, the Curtiss-Wright Nuclear Research Reactor (CWRR) at Quehanna, Pennsylvania. Since the proposed license is to authorize only possession of the reactor facility, the details of the hazards of operating the reactor have not been examined. Rather, those precautions necessary to maintain the status quo of the inactive facility to assure that no significant hazard to the health and safety of the public exists have been considered. The procedures outlined by the University are substantially equivalent to those previously submitted by the Curtiss-Wright Corporation, and the University personnel to be involved are of comparable competence.

It is noted that thirty-four irradiated fuel elements are presently stored in locked racks which are positioned along the sides of the pool at a depth of about 18 feet, and that thirty new fuel elements are stored in a locked storage room. To minimize the possibility of a reactivity accident, we believe that the license should contain a condition that these fuel elements should not be moved from their present locations unless procedures for transferring these elements have been reviewed and approved by the Commission.

Subject to this restriction, it is our opinion that the University has specified the necessary precautions to be taken to assure that the facility will be maintained such that no undue hazard to the health and safety of the public will exist, and that possession of the facility by The Pennsylvania State University will not present any substantial change in the hazards to public health and safety from those previously considered in connection with the shutdown and maintenance of this facility on a standby basis.

Edson G. Case, Chief
Research & Power Reactor Safety Branch
Division of Licensing and Regulation

NOV 29 1960

Date:

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-39

CURTISS-WRIGHT CORPORATION

NOTICE OF TERMINATION OF UTILIZATION FACILITY LICENSE

Notice is hereby given that, as requested by the licensee, License No. R-36, issued to Curtiss-Wright Corporation, has been terminated, as of December 12, 1960, as set forth below.

FOR THE ATOMIC ENERGY COMMISSION

E. L. Kirk
Deputy Director
Division of Licensing & Regulation

Dated at Germantown, Maryland
this day of , 1960.

NOV 29 1960

CURTISS-WRIGHT CORPORATION

DOCKET NO. 50-39

TERMINATION OF UTILIZATION FACILITY LICENSE

Pursuant to the request of the licensee, dated November 17, 1960, License No. R-36, issued to Curtiss-Wright Corporation to operate a utilization facility at Quehanna, Pennsylvania, has been terminated as of December 12, 1960. Ownership of the facility is being transferred by Curtiss-Wright Corporation to The Pennsylvania State University upon the receipt of appropriate licenses by the University.

FOR THE ATOMIC ENERGY COMMISSION

R. L. Kirk
Deputy Director
Division of Licensing & Regulation

Date of Issuance:

NOV 29 1960