

JAN 14 1959

Docket No. 50-32

Curtiss-Wright Corporation
Research Division
Cochanna, Pennsylvania

Attention: Mr. Paul R. Lillenas
Nuclear Power Department

Gentlemen:

Attached is Amendment No. 2 to facility license R-36 issued to Curtiss-Wright Corporation. The amendment authorizes Curtiss-Wright to operate its reactor at power levels up to 1 megawatt without secondary cooling under certain conditions and restrictions set out therein.

Also attached is a copy each of a notice of this action which has been submitted for publication in the Federal Register and a related hazards analysis prepared by the Division of Licensing and Regulation.

DISTRIBUTION

R. Lowenstein, OGC
E. E. Hall, RD
D. C. Clark, IS
M. M. Mann, INS (2)
H. Steele, L&R
Formal Docket
Suppl. Docket
Doc. Rm.

Sincerely yours,

Director
Division of Licensing and Regulation

Enclosures:

1. Amendment No. 2
2. Notice to Federal Register
3. Hazards Analysis

LB reading
L&R reading

D-123

OFFICE	IRL	IRL	L&R	OGC		HER
SURNAME	TEwards/mjm	LJohnson	H.Pirce	TBC	N.G.	CKC
DATE	1/9/59	1/14/59	1/14/59	1/9/59	1/12/59	



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

CURTISS-WRIGHT CORPORATION
DOCKET NO. 50-39

AMENDMENT OF UTILIZATION FACILITY LICENSE

License No. R-36
Amendment No. 2

In addition to the activities previously authorized by the Commission under License No. R-36, as amended, Curtiss-Wright Corporation is hereby authorized to operate the facility without secondary cooling at power levels up to one megawatt (thermal) for test runs as described in the application for license amendment dated November 7, 1958, subject to the terms and restrictions contained therein. In addition no test authorized by this Amendment No. 2 shall exceed 10 hours in duration.

This amendment is effective as of the date of issuance.

FOR THE ATOMIC ENERGY COMMISSION

H. L. Price
Director
Division of Licensing and Regulation

Date of Issuance: JAN 14 1959

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-39

CURTISS-WRIGHT CORPORATION

NOTICE OF ISSUANCE OF FACILITY LICENSE AMENDMENT

Please take notice that the Atomic Energy Commission has issued Amendment (No. 2) set forth below to License R-36 authorizing Curtiss-Wright Corporation as requested in application for license amendment dated November 7, 1958, to operate the Company's research reactor at Quehanna, Pennsylvania at power levels up to one (1) megawatt (thermal) for short periods of time. The Commission has found that operation at this level under the terms and conditions of the license as amended will not present 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 amendment is not necessary in the public interest since operation at the level authorized by this amendment will not present any substantial change in the hazards to the health and safety of the public from those considered and evaluated in connection with the previously approved operation of the reactor.

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 amendment upon receipt of a request therefor from the licensee or an intervener within thirty (30) days after issuance

of the license amendment. For further details, see (1) the application for license amendment submitted by Curtiss-Wright Corporation and (2) a hazards analysis of the proposed operation at 1 megawatt prepared by the Division of Licensing and Regulation, both on file at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. A copy of item (2) above may be obtained at the Commission'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

H. L. Price
Director
Division of Licensing and Regulation

Dated at Germantown, Maryland
this 14th day of January, 1959.

CURTISS-WRIGHT CORPORATION
DOCKET NO. 50-39

AMENDMENT OF UTILIZATION FACILITY LICENSE

License No. R-36
Amendment No. 2

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This amendment is effective as of the date of issuance.

FOR THE ATOMIC ENERGY COMMISSION

H. L. Price
Director
Division of Licensing and Regulation

Date of Issuance: JAN 14 1959

UNITED STATES ATOMIC ENERGY COMMISSION

HAZARDS ANALYSIS

IN THE MATTER OF

AMENDMENT OF FACILITY LICENSE NO. R-36

CURTISS-WRIGHT CORPORATION

DOCKET NO. 50-39

On April 29, 1958, License No. R-36 was issued to Curtiss-Wright Corporation authorizing operation of its one megawatt research reactor at Quehanna, Pennsylvania. Pending installation of the cooling system, operation of the reactor was limited to a maximum of 100 Kw. Curtiss-Wright, in an application for license amendment dated November 7, 1958, advises that the primary coolant system is completed and fully instrumented. The heat exchanger, cooling tower and secondary coolant system pumps comprising the secondary system are not yet installed.

In order to test the primary system and the shielding, Curtiss-Wright requests an amendment to its license which would authorize operation of the reactor for short periods of time at 1 megawatt power under the following conditions and restrictions:

- a) The primary coolant flow rate shall be maintained at a nominal 700 gallons per minute.
- b) The facility shall be shut down at such time as the primary coolant flow rate is less than 525 gallons per minute (75% of the nominal rate).
- c) The differential temperature across the core shall not exceed 10°F.
- d) Provisions shall be made for an alarm which will indicate a core effluent temperature in excess of 110°F.

Calculations, with which we agree, submitted by the licensee indicate that operation under the above conditions would result in an average maximum fuel temperature of about 114°F. The calculations were based on a core array of 4 x 5 with reflector elements in the core.

The reactor pool water contains approximately 147,000 gallons of water at room temperature. Assuming no external cooling, it is estimated that reactor operation at a power of 1 megawatt for a period of 10 hours would result in heating the reactor pool water from about 64°F to 100°F.

An analysis of the reactor design and the supplementary information presented in the request for the amendment leads to a conclusion that the reactor can be operated under the proposed conditions and restrictions without undue hazard to the health and safety of the public.

FOR THE DIVISION OF LICENSING AND REGULATION

H. L. Price
Director

Date: JAN 14 1959