



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
November 4, 1977

Docket No.: 50-17

Industrial Reactor Laboratories, Inc.
ATTN: Mr. David W. Leigh, Project Manager
Plainsboro, New Jersey 08536

Gentlemen:

The Commission has issued the enclosed Order which terminates Facility License No. R-46 for the IRL Research Reactor in accordance with your request of June 12, 1975, as supplemented on November 26, 1976, February 28, 1977, and July 1, 1977.

In connection with this action, we are enclosing three copies of Amendment No. 14 to Indemnity Agreement No. B-12 that terminates the indemnity coverage for the reactor facility. Please sign and return one copy to this office.

Byproduct License No. 29-03686-02 will remain in effect until the Commission has determined that adequate disposition of the residual material has been made.

A copy of the related Safety Evaluation is also enclosed. The Order is being filed with the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Reid".

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosures:

1. Order Terminating
Facility License
2. Indemnity Agreement
No. B-12, Amendment No. 14
3. Safety Evaluation

cc w/enclosures: See next page

B-8

Industrial Reactor
Laboratories, Inc.

- 2 -

cc w/enclosures:

State House Annex
ATTN: Deputy Attorney General
State of New Jersey
36 West State Street
Trenton, New Jersey 08625

Plainsboro Township Committee
ATTN: Mr. Chester A. Steen
Township Clerk
P. O. Box 278
Plainsboro, New Jersey 08536



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
INDUSTRIAL REACTOR LABORATORIES, INC.

N. L. INDUSTRIES, INC.

DOCKET NO. 50-17

ORDER TERMINATING FACILITY LICENSE

By application dated June 12, 1975^{*/}, as supplemented November 26, 1976, February 28, 1977, and July 1, 1977, Industrial Reactor Laboratories, Inc. and N. L. Industries, Inc. (the licensees) requested authorization to terminate Facility License No. R-46 for the Industrial Reactor Laboratory Research Reactor (the facility), located in Plainsboro Township, Middlesex County, New Jersey. A "Notice of Proposed Issuance of Order Authorizing Termination of Facility License" was published in the Federal Register on December 30, 1976 (41 F.R. 56893). No request for a hearing or petition for leave to intervene was filed following notice of the proposed action.

The Commission has found that the facility has been dismantled and decontaminated, and that satisfactory disposition has been made of the component parts and fuel in accordance with the Commission's regulations in 10 CFR Chapter I, and in a manner not inimical to the common defense and security or to the health and safety of the public. The facility has been dismantled pursuant to the Commission's Order dated September 12, 1975. The facility area has been inspected

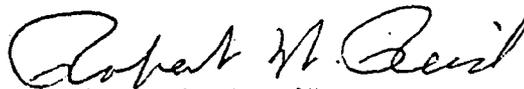
^{*/} Copies of 1) the application, as supplemented, 2) the Commission's Order Authorizing Dismantling of Facility dated September 12, 1975, and 3) the Commission's Safety Evaluation in support of this Order, are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. A copy of items 2) and 3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Operating Reactors.

by the Commission's Office of Inspection and Enforcement and radiation surveys confirm that the reactor-generated radioactive material has been removed as required by the Commission's Order of September 12, 1975. Residual byproduct material associated with NRC Byproduct Material License No. 29-03686-02 will be considered separately. The NRC Byproduct Material License will remain in effect until the NRC has determined that adequate disposition of that residual material has been made.

Therefore, pursuant to the application by Industrial Reactor Laboratories, Inc. and the N. L. Industries, Inc., Facility License No. R-46 is hereby terminated as of the date of this Order.

Dated at Bethesda, Maryland, this 4th day of November 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Acting Assistant Director
for Operating Reactors
Division of Operating Reactors



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING ORDER TERMINATING FACILITY LICENSE NO. R-46

INDUSTRIAL REACTOR LABORATORIES, INC.

N. L. INDUSTRIES, INC.

IRL RESEARCH REACTOR

DOCKET NO. 50-17

By application dated June 12, 1975, as supplemented on November 26, 1976, February 28, 1977, and July 1, 1977, Industrial Reactor Laboratories, Inc. (IRL) and N. L. Industries, Inc. (the licensees) requested that Facility License No. R-46 be terminated following completion of dismantling the IRL Research Reactor (the facility). The reactor has been dismantled and disposed of in accordance with the IRL dismantling plan dated June 12, 1975 and our dismantling order dated September 12, 1975. The reactor fuel, all reactor core components and all core support structures have been removed from the site and extensive decontamination of the facility has been accomplished.

We have reviewed the final radiological survey report, prepared by AtCOR, Incorporated, dated February 28, 1977, as revised on July 1, 1977, after decontamination of the IRL facility. Our review considered the gamma dose-rate developed guides, the sensitivity, ranges and efficiency features of the alpha, beta, and gamma instruments used in the survey and the survey techniques used to monitor smears, particulate samples and fixed surface contamination as well as direct gamma dose-rates within all areas of the reactor facility. We compared all survey results against the recommendations of Regulatory Guide 1.86 "Termination of Operating Licenses for Nuclear Reactors" and the permissible limits for exposure to radiation in unrestricted areas as required by 10 CFR 20.105(a). The NRC Office of Inspection and Enforcement has performed radiation surveys on the site which confirm the results indicated in the final survey report of February 28, 1977, as revised on July 1, 1977.

Some residual byproduct material (less than 20 millicuries) associated with NRC Byproduct License No. 29-03686-02 will be considered with respect to terminating the Byproduct Material License. The Byproduct Material License will continue in effect until the NRC has determined that adequate disposition of this residual activity has been made.

As a result of our comparison of survey results with regulations and guides and in consideration of the amount and type of residual contamination from reactor-generated wastes and the degree of its confinement, we find that the IRL facility has been decontaminated of reactor-generated wastes to levels well below those described in Regulatory Guide 1.86 for fixed and removable contamination and that the remaining reactor-generated activity will provide negligible hazard to the health and safety of the public. Also, considerable effort has been expended by the licensee to reduce radiation exposure levels in accessible and also inaccessible areas to levels well below that which are required by 10 CFR 20.105(a).

Environmental Consideration

We have concluded that the termination of this license involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this termination order.

Conclusions

We have concluded, based on the reasons discussed above, that termination of this license does not involve a significant hazards consideration. We also conclude that there is reasonable assurance (i) that the termination of this license will not endanger the health and safety of the public and (ii) that the license termination is in compliance with the Commission's regulations and will not be inimical to the common defense and security or to the health and safety of the public.

Dated: November 4, 1977