UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 30-652
University of Illinois at Urbana-Champaign Urbana, Illinois 61801	)	Materials License No. 12-00330-05

ORDER TO MODIFY LICENSE

I

The University of Illinois at Urbana-Champaign, of Urbana, Illinois ("the licensee") is the holder of Materials License No. 12-00330-05 issued by the Nuclear Regulatory Commission ("the Commission"). The license includes authorization for possession and use of any byproduct material, in any form, with atomic numbers 3-83, inclusive. The maximum quantity of each radionuclide in this atomic number range is 25 curies with a total of 500 curies except: 2000 curies of hydrogen-3. The license authorizes the use of the materials in research and development. The license is currently active and is due to expire on March 31, 1982.

II

Before issuance of a license to operate, staff review of the application determined that the licensee can operate the facility in a safe manner. Nonetheless, based on the lessons learned from the accident at Three Mile Island and new perspectives on emergency preparedness and planning, the Commission has reevaluated the emergency preparedness requirements for its fuel cycle and materials licensees. The Commission has decided that significant improvements need to be made promptly to ensure that adequate onsite emergency response

actions will be taken by licensees with major operations in cases where, even though unlikely, potentially serious radiation accidents could occur. The operations licensed to be carried out pursuant to Materials License No. 12-00330-05 appear to fall in this category and require the development of a comprehensive onsite radiological contingency plan. Specifically, considerations are needed to ensure (1) that the plant contains adequate engineered safety features and is otherwise designed to limit releases of radioactive materials and radiation exposures in the event of an accident, (2) that a capability exists for measuring and assessing the significance of accidental releases of radioactive materials, (3) that appropriate emergency equipment and planning are provided onsite to protect workers against radiation hazards that might be encountered following an accident, (4) that notifications are made promptly to federal, state, and local government agencies, and (5) that necessary recovery actions are taken in a timely fashion to return the plant to a safe condition following an accident.

The information to be developed and documented is described in the enclosed "Standard Format and Content for Radiological Contingency Plans for Fuel Cycle ar Materials Facilities" (Enclosure 1). In summary, the information to be submitted to NRC for review includes a (1) description of plant systems important to safety; (2) characterization of classes of credible emergencies that might occur; (3) description of radiological contingency measures for each class of emergency; (4) designation of authorities and responsibilities of key individuals and groups employed by the licensee; and (5) a description of equipment and facilities designated for use during radiation emergencies. The plan is to be directed toward mitigating the consequences of radiological emergencies and

providing reasonable assurance that appropriate measures will be taken during an emergency to assure protection of the public and minimize adverse environmental impacts. In preparing the plan, consideration should be given to a set of credible accidents ranging from almost everyday occurrences of small consequence through highly improbable, but not impossible, accidents such as those resulting from severe natural phenomena, human error, and multiple equipment failures, and sabotage.

III

In addition to onsite radiological contingency planning, as discussed in Section II above, offsite emergency response planning is also highly important. Offsite planning requirements for fuel cycle and materials facilities are being developed separately and will be considered in a proposed rulemaking to be published in the coming months. Within the framework of that rulemaking, NRC will carry out extensive coordination with state governments and the Federal Emergency Management Agency (FEMA) concerning applicable requirements.

IV

The Commission believes that it is prudent and necessary to require the licensee to develop and submit within 240 days of the effective date of this Order, or before, an onsite radiological contingency plan, as discussed in Section II above, applicable to operations licensed pursuant to Materials License No. 12-00330-09. Such a plan can be developed and effectively implemented apart from offsite emergency response planning, which necessarily involves state and local government emergency planning actions. The onsite radiological contingency plan is a necessary extension of protective actions

taken by the licensee during normal operations. Such planning is essential to ensure that proper plans are made by the licensee to protect the public from accidents that could result from the licensed operations. A lesson learned from the Three Mile Island accident is that accidents thought to be highly improbable can and will occur, and that proper emergency preparedness is required to mitigate radiological consequences.

The reporting and record keeping part of this onsite radiological contingency plan is subject to clearance by the General Accounting Office. GAO review and clearance will not stay the effective date of this Order as regards the requirement that the licensee develop the plan. Unless advised to the contrary, GAO clearance will be effective within 45 days from the date of this Order.

V

Accordingly, pursuant to sections 161b and 161o of the Atomic Energy Act of 1954, as amended, §30.34(e) of 10 CFR Part 30, and §2.204 of 10 CFR Part 2, IT IS HEREBY ORDERED THAT within 240 days of the effective date of this Order, the licensee shall submit:

1. A radiological contingency plan in accordance with Enclosure 1 of this Order, "Standard Format and Content for Radiological Contingency Plans for Fuel Cycle and Materials Facilities," and an application for license amendment to incorporate such plan as approved as a condition of the license; or alternatively,

2. An application for license amendment to reduce the possession limits for radioactive materials below those specified in Enclosure 2 of this Order.

VI

The licensee or any person whose interest may be affected by this Order may, within 20 days of the date of the Order, request a hearing with respect to all or part of the Order. A request for a hearing shall be addressed to the Secretary of the Commission, U.S.N R.C., Washington, D.C. 20555. A copy of the hearing request shall also be sent to the Executive Legal Director, U.S.N.R.C., Washington, D.C. 20555. If a person other than the licensee requests a hearing, that person shall set forth with particularity the nature of his or her interest and the manner in which his or her interest may be affected by this Order in accordance with 10 CFR §2.714(a)(2) of the Commission's Rules of Practice.

If a hearing is requested by the licensee or a person who has an interest affected by this Order, the Commission will issue an order designating the time and place of the hearing.

If no hearing is requested, this Order will become effective 20 days from the date of the Order. If a hearing is requested, this Order will become effective on the date specified in an order made following the hearing.

VII

If a hearing is held, the issue to be considered at the hearing shall be whether the licensee (1) shall submit a radiological contingency plan which complies with Enclosure 1 of this Order, "Standard Format and Content for Radiological Contingency Plans for Fuel Cycle and Materials Facilities," or (2) if a plan is not submitted as required in Section V (1) of the Order, should an application for a license amendment to reduce its possession limits for radioactive materials below those specified in Enclosure 2 of this Order be submitted.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard E. Cunningham, Director
Division of Fuel Cycle and Material Safety

Dated at Silver Spring, Maryland this 11 th day of February, 1981

ENCLOSURE 1

STANDARD FORMAT AND CONTENT FOR RADIOLOGICAL CONTINGENCY PLANS FOR FUEL CYCLE AND MATERIALS FACILITIES

January 9, 1981

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ry Commission