

JUN 29 1984

Docket No. 70-687

MEMORANDUM FOR: Leland C. Rouse, Chief
 Advanced Fuel and Spent Fuel Licensing Branch
 Division of Fuel Cycle and Material Safety

FROM: Glenn A. Terry, Section Leader
 Technical Assessment and Evaluation Section
 Uranium Fuel Licensing Branch
 Division of Fuel Cycle and Material Safety

SUBJECT: DATE CORRECTION IN JANUARY 25, 1984, MEMORANDUM
 CONCERNING UNION CARBIDE'S EMERGENCY PLAN

In regard to my memorandum of January 25, 1984, it was noted that the submittal date of August 31, 1983, for Union Carbide's supplemental information was incorrect. The correct date for this supplemental information was August 8, 1983. This incorrect date was used in the Safety Evaluation Report and Proposed Condition that was enclosed with my memorandum of January 25, 1984. A corrected copy of the Safety Evaluation Report and Proposed Condition is enclosed.

151

Glenn A. Terry, Section Leader
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 Evaluation Section
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 Division of Fuel Cycle and
 Material Safety, NMSS

Enclosure:
 As stated

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DATE		6/21/84	6/29/84			

Enclosure 1

DOCKET NO.: 70-687

LICENSEE: Union Carbide Corporation
Medical Products Division
P. O. Box 324, Tuxedo, New York 10987

SUBJECT: REVIEW OF EMERGENCY PLAN: SAFETY EVALUATION REPORT

1 Background

The Union Carbide Corporation (UC) of Tuxedo, New York, is authorized by NRC License No. SNM-639 to possess 23 kg of uranium-235 enriched to greater than 20 percent (Amendment No. 8, August 18, 1982), and other isotopes in small quantities. The licensee produces isotopes for medical use from the fission products of enriched uranium targets. The current license was renewed on January 13, 1976 and is presently being considered for renewal.

On February 11, 1981, the NRC issued an Order to UC to submit within 120 days of the effective date of the order, a Radiological Contingency Plan in accordance with NUREG-0763 (Enclosure 1 to the Order). The Order was to address only those facilities and radioactive materials covered by License No. SNM-639. UC, in letter dated June 19, 1981, stated that NRR also was requesting an emergency plan for licenses under Part 50, and suggested that a consolidated emergency plan addressing both Part 50 and 70 licenses be written. On July 24, 1981, NRC modified the February 11, 1981 Order by allowing UC to prepare an integrated site-wide plan and submit it by November 3, 1981. By letter dated November 2, 1981, UC requested that the deadline for the revision of their present site emergency plan (submitted May, 1980) be extended until after they received further NRR guidance from updated Regulatory Guide 2.6 and ANS Standard 15.16. On June 29, 1982, NRC sent UC a letter extending the emergency plan submittal date to coincide with the Part 50 deadline of September 6, 1982.

On September 3, 1982, UC submitted an integrated site-wide emergency plan for their Tuxedo, New York facility. A number of deficiencies were found in this plan and UC was requested to submit additional information. This additional information was submitted by UC on August 8, 1983. IE is presently reviewing this material; however, IE's response does not effect NMSS licensed operations. The September 3, 1982 emergency plan as amended by the additional information submitted on August 8, 1983, is in accordance with the provisions of the July 24, 1981 Order and subsequent guidance.

11 Discussion

The UC, Tuxedo site is located in Sterling Forest, which is 3 1/4 miles north-northwest of Tuxedo Park, Orange County, New York. The site is within a 22,000 acre, privately owned woodland area that is very thinly populated. The facility produces medical radioisotopes, mainly molybdenum 99, by irradiating, in their test reactor, targets fabricated with enriched uranium. The Special Nuclear Materials used at the Tuxedo plant are covered under License No. SNM-639. The activities authorized under SNM-639 are: (1) preparing the targets for irradiation in the reactor; (2) performing chemical separation of the radioactive isotopes from the irradiated targets; and (3) processing irradiated SNM waste for recycling.

The site-wide Emergency Plan for the UC Tuxedo site submitted on September 3, 1982, and supplemented on August 8, 1983, is adequate to demonstrate that the licensee has accomplished the purpose and intent of radiological contingency planning, by assuring (1) that the facility is properly configured 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 procedures are provided onsite to protect workers against radiation hazards that might be encountered following an accident, (4) that notifications are promptly made offsite 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 principle location where Special Nuclear Material is handled is in the Hot Laboratory Building. The building, as described in the emergency plan, is properly configured to limit radioactive releases and radiation exposures from abnormal operations in that: all exhaust air from the Hot Lab passes through roughing filters, absolute (HEPA) filters, and when necessary through charcoal filters prior to passage to a monitoring system and 50 foot stack; the Hot Lab filter banks are protected by a CO2 fire suppression system; ventilation systems are designed to assure positive, continuous flow of air from non-radioactive areas to radiation areas; and eight radiation monitors with audio and visual alarms are located throughout the building.

The radiological contingency planning organization, as described in the emergency plan, provides adequate preplanning for emergency response. The arrangements for offsite assistance as well as the responsibilities of various supporting organizations are established. Procedures for implementing emergency responses for the listed accident scenarios are described, and general plans for recovery and reentry are developed.

III Conclusions and Recommendations

Since UC's site-wide Emergency Plan satisfies the radiological contingency planning requirements of the Order dated July 24, 1981, and IE's review of the plan does not effect NMSS licensed material operations, the UC Tuxedo facility license, SNM-639, should be amended to incorporate the Emergency Plan submitted on September 3, 1982, and supplemented on August 8, 1983, as a condition of the license. The proposed condition should have no adverse effect on the public health and safety or on the quality of the environment and should improve UC's ability to protect against, respond to, and mitigate the consequences of an accident involving radioactive materials.



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Approved:



Glenn A. Terry, Section Leader

Enclosure 2

The licensee shall implement, maintain, and execute the response measures of his Radiological Contingency Plan submitted to the Commission on September 3, 1982, and revised on August 8, 1983. The licensee also shall prepare and maintain implementing procedures for his Radiological Contingency Plan as necessary to implement the Plan. The licensee shall make no change in his Radiological Contingency Plan that would decrease the response effectiveness of the Plan without prior Commission approval as signified by a license amendment. The licensee may make changes to his Radiological Contingency Plan without prior Commission approval if the changes do not decrease the response effectiveness of the Plan. The licensee shall maintain records of changes that are made to the plan without prior approval for a period of two years from the date of the change and shall furnish the Chief, Advanced Fuel and Spent Fuel Licensing Branch, Division of Fuel Cycle and Material Safety, NMSS, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and the appropriate NRC Regional Office specified in Appendix D of 10 CFR Part 20 a report containing a description of each change within six months after the change is made.