

UNITED STATES NUCLEAR REGULATORY COMMISSIONCINTICHEM, INC.DOCKET NOS. 50-54 AND 70-687ENVIRONMENTAL ASSESSMENT ANDFINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of a schedular exemption pursuant to 10 CFR 20.2301 from the requirements of 10 CFR 20.1001 - 20.1208 and 20.1501 - 20.2401 to Cintichem, Inc (the Licensee). Instead of implementing the requirements of 10 CFR 20.1001 - 20.1208 and 20.1501 - 20.2401, Cintichem would complete the decommissioning of the Tuxedo, New York facility in accordance with the applicable requirements of 10 CFR 20.1 - 20.104 and 20.107 - 20.601. Cintichem would be required to comply with the requirements of 10 CFR 20.1301 and 20.1302. This exemption would be in effect from January 1, 1994, until December 15, 1995, the expiration date of Cintichem's Special Nuclear Material (SNM) license.

ENVIRONMENTAL ASSESSMENT:Identification of Proposed Action:

The approval of the proposed action would permit the Licensee to complete the decommissioning of its Tuxedo, New York facility without implementing 10 CFR 20.1001 - 20.1208 and 20.1501 - 20.2401. However, Cintichem would be required to comply with the requirements of 10 CFR 20.1301 and 20.1302

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Instead of implementing the requirements of 10 CFR 20.1001 - 20.1208 and 20.1501 - 20.2401, Cintichem would complete the decommissioning of the Tuxedo, New York facility in accordance with the applicable requirements of 10 CFR 20.1 - 20.104, 20.107 - 20.601 and 20.1301 - 20.1302. This exemption would be in effect from January 1, 1994, until December 15, 1995, the expiration date of Cintichem's Special Nuclear Material (SNM) license. If decommissioning operations have not been completed at that time, the schedular exemption would be evaluated in conjunction with the renewal of Cintichem's SNM license.

Cintichem began decommissioning its Tuxedo, New York facility following the approval of the Licensee's decommissioning plan and the issuance of a license amendment authorizing decommissioning in January 1992 and an order authorizing decommissioning in November 1991. By January 1, 1994, Cintichem estimates that 80 percent of the decommissioning operations will be completed at the facility and only about 25 millicuries (mCi) of licensed radioactive material will remain at the facility primarily as contamination on structural or equipment surfaces and in the soil in excess of release criteria and natural background. Cintichem estimates that the decommissioning operations at the facility will be completed by August 1994. When decommissioning operations are completed, the Licensee intends to request that the NRC licenses at the facility be terminated and the facility be released for unrestricted use.

Need for Proposed Action

The schedular exemption would defer the implementation of the requirements of 10 CFR 20.1001 - 20.2401, which is mandatory for all NRC licensees on January 1, 1994, unless the NRC, pursuant to 10 CFR 20.2301

grants an exemption from these requirements. The schedular exemption would allow Cintichem to complete decommissioning of its Tuxedo, New York facility under the current radiation protection requirements of 10 CFR 20.1 - 20.104 and 20.107 - 20.601. In addition, Cintichem would be required to comply with the requirements of 10 CFR 20.1301 and 20.1302. The exemption would be in effect from January 1, 1994, until December 15, 1995, the expiration date of Cintichem's Special Nuclear Material (SNM) license. If decommissioning operations have not been completed at that time, the schedular exemption would be evaluated in conjunction with the renewal of Cintichem's SNM license. Based on the following information provided by Cintichem in letters dated July 15, August 27, and October 1, 1993, NRC staff determined that granting the proposed schedular exemption would ensure adequate protection of facility workers and the public and reduce unnecessary costs for Cintichem.

1. The decommissioning project will be approximately 80% completed by January 1, 1994, the mandatory implementation date of 10 CFR 20.1001 - 20.2401. In addition, as of July 1993, over 93% of the radioactive material has been removed from the site, with the maximally exposed individual receiving only 1.88 rem for any 12 month period. As such, Cintichem believes that the benefits from implementing 10 CFR 20.1001 - 20.2401 will not be realized during the remainder of the decommissioning project.
2. Over 97% of the estimated worker radiation exposure will have been incurred by January 1, 1994. The remaining estimated worker radiation exposure for the project after January 1, 1994, is 8.6 person-rem (whole body) which

would be received by about 50 workers. The maximum estimated annual whole body dose to any one worker after January 1, 1994, is 0.6 rem

3. Only about 25 mCi of licensed radioactive material will remain at the site by January 1, 1994. The radioactive material that is estimated to be on-site will be that which is present as contamination on structural or equipment surfaces and in the soil in excess of release criteria and natural background.
4. No work involving the potential for exposure to airborne radioactivity in excess of 10% Maximum Permissible Concentration limits specified in 10 CFR 20.103(a)(1) is expected in 1994.
5. The average estimated individual occupational radiation exposure should not be greater than 0.18 rem (whole body) for 1994.
6. Implementation of the 10 CFR 20.1001 - 20.2401 requirements would cost an additional 1.24 million dollars. Cintichem believes that the cost of implementing the requirements of 10 CFR 20.1001 - 20.2401 is not justified from a health and safety perspective.

Environmental Impacts of the Proposed Action

NRC staff initially evaluated the Licensee's decommissioning plan before issuing the license amendment and order authorizing decommissioning of the facility and concluded that the decommissioning of the facility under 10 CFR 20.1 - 20.601 would have no significant impact on the quality of the human

environment. In its decommissioning plan dated October 19, 1990, and in additional information supplied in support of the decommissioning plan, Cintichem estimated that the total exposure for decommissioning their facility would be 368 person-rem (whole body). In evaluating the decommissioning plan NRC staff concluded that Cintichem had developed policies and procedures that maintained occupational radiation exposures within radiation exposure limits and as low as reasonably achievable (ALARA). The total exposure from decommissioning operations, to date, has been 180 person-rem (whole body) or about 56% of the estimated exposure for this point in the decommissioning operations. In addition, in April 1992, Cintichem adopted an administrative dose limit for occupational radiation exposure of 4 rem per year (whole body). To date, the maximally exposed worker has received 1.88 rem (whole body) for any 12-month period.

Cintichem estimated that the occupational exposure that will be received during the remaining decommissioning operations is estimated to be about 8.6 person-rem (whole body) and that this exposure will be received by about 50 workers. The maximum estimated annual whole body dose to any one worker after January 1, 1994, is 0.6 rem.

Cintichem stated that, based on environmental monitoring data to date (thermoluminescent dosimeters and air and water sampling), the estimated annual radiation exposure received by residents living near the site from decommissioning operations at the Cintichem facility will not be in excess of that received from natural background. Staff has reviewed Cintichem's environmental monitoring data and believes that doses to members of the public from decommissioning operations at the Cintichem facility will not be measurable above natural background.

Cintichem concluded that based on these factors the intent of 10 CFR 20.1001 - 20.2401 would be realized. NRC staff believes that there would be minimal benefit to worker or public protection from implementing the requirements of 10 CFR 20.1001 - 20.2401 for the duration of the decommissioning operations at the Cintichem facility because existing programs and procedures already in place at the Cintichem facility limit radiation exposures to less than the limits in 10 CFR 20.1001 - 20.2401, decommissioning operations will be performed for a limited time after January 1, 1994, and the amount of radioactive material that is expected to be on-site after January 1, 1994, is small (25 mCi).

The proposed schedular exemption does not affect plant nonradiological effluents. In addition, the proposed schedular exemption would not authorize a change in licensed activities. Under the exemption, Cintichem would be required to comply with the effluent release limits in 20.1302. In addition, the New York State Department of Environmental Conservation (NYSDEC) has issued proposed effluent limits that are identical to those contained in 10 CFR Part 20.1302. The NYSDEC regulations are expected to become effective in early 1994. Because the Licensee is also subject to the NYSDEC requirements, the Licensee will be required to maintain effluent releases at those levels specified in 10 CFR Part 20.1302 by both NRC and NYSDEC. With regard to potential radiological and non-radiological impacts, the Commission concludes that there are no measurable radiological or non-radiological impacts associated with this exemption.

Alternatives to the Proposed Action

NRC staff evaluated the alternative to this proposed action, namely

denying the Licensee's request and requiring Cintichem to comply with 10 CFR 20.1001 - 20.2401 beginning on January 1, 1994. Staff concluded that denying the Licensee's request would not result in lesser environmental impacts than the proposed action because of the lower effluent release and public dose limits in 10 CFR 20.1301 and 1302 would be required by the NRC in both approaches. In addition, doses to workers are expected to be low in both approaches. For reasons discussed above, NRC staff concluded that any lesser environmental impacts that would be expected from adopting the requirements of 10 CFR 20.1001 - 20.2401 would also not be realized at the Cintichem facility.

In that the NRC concluded that there are no significant environmental impacts that would result from the proposed action, any additional alternatives with equal or greater impacts need not be evaluated.

Alternative Use of Resources

This action does not involve the use of any resources not already evaluated as part of the approval of the Licensee's decommissioning plan.

Agencies and Persons Consulted

The Licensee initiated this action. The New York State Departments of Environmental Conservation and Labor were consulted and had no objections to granting the Licensee's request.

FINDING OF NO SIGNIFICANT IMPACT

Based on this environmental assessment, NRC staff concludes that the proposed action will not have a significant impact on the quality of the human

environment. Therefore, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For additional information, see the Licensee's request for an exemption dated July 15, 1993 and additional information dated August 27, 1993, and October 1, 1993, that is available for inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, DC 20037.

Dated at Rockville, Maryland, this 8th day of *December*, 1993

FOR THE NUCLEAR REGULATORY COMMISSION

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