

APPENDIX A  
NOTICE OF VIOLATION

Cintichem, Incorporated  
Tuxedo, New York

Docket Nos. 70-687  
50-54

As a result of the team inspection conducted on October 23-27, 1989, and in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy) (1988), the following violations were identified:

- A. Section 3.2.4.12, "Air Sampling and Internal Radiation Protection", of Part 1 - Criteria of the NRC-approved license application for License No. SNM-639 states, in part, that fixed contamination action levels for alpha activity are 200 counts per minute/100 cm<sup>2</sup> (maximum 1330 dpm/100 cm<sup>2</sup>). Areas above this limit shall be cleaned or labeled with an identification mark.

Contrary to the above, during the inspection on October 23-27, 1989, four areas on the floor, located on the second floor of the hot laboratory, had fixed alpha contamination levels ranging from 8,000 to 24,000 dpm/100 cm<sup>2</sup> and these areas were neither cleaned or labeled with an identification mark. The identified areas included the entrance to the plating laboratory, the entrance to the waste laboratory, the entrance to the solution laboratory, and the passageway outside the solution laboratory (70-687).

This is a Severity Level IV Violation (Supplement VI D).

- B. 10 CFR 50.54(q) and 10 CFR 70.32(i) require a licensee authorized to possess and/or operate a research reactor or a fuel facility to follow and maintain, in effect, emergency plans which meet the requirements in Appendix E to this part. Appendix E, Paragraph IV.F requires, in part, "the training of employees ... to ensure that employees of the licensee are familiar with their specific emergency response duties. This shall include a description of specialized initial training and periodic retraining programs to be provided to emergency directors, personnel responsible for accident assessment, radiological monitoring teams, fire control teams, first aid and rescue teams", etc.

Contrary to the above, during 1989, the licensee's emergency plan training program did not provide for the initial training of individuals who may be required to respond to an emergency to ensure that they were familiar with their specific emergency duties. In addition, the licensee's periodic retraining program was not effective to assure that emergency

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directors, personnel responsible for accident assessment and radiological monitoring teams were familiar with their specific emergency response duties, in that they were not aware of many emergency plan changes which were described in a July 1989 revision and their classification of emergencies were not consistent with and often not in accordance with the classification tables contained in the plan. (70-687; 50-54)

This is a Severity Level IV Violation (Supplement VIII-D).

- C. Technical Specification 3.10 for License R-81 and Section 5.2.1 of Part 1 - Criteria of the NRC-approved license application for License SNM-639 incorporate Tables 3.4 and 5.2.1, respectively, into the facility licenses and state that the radiological environmental monitoring program shall be conducted as specified in the respective tables. Technical Specification 3.11 requires the conduct of a land use census once each 12 months and requires that the location of the nearest milk animal, nearest residence and nearest garden greater than 500 square feet be identified in each of the 16 meteorological sectors. Tables 3.4 and 5.2.1 require the performance of gamma isotopic analyses on particulate composite samples by location at least once per 92 days and the performance of I-131 analysis on food products at locations to be determined from the land use census.

Contrary to the above, during 1989 up to the inspection on October 23-27, 1989.

1. The licensee did not perform gamma isotopic analyses on particulate composite samples for each location at least once per 92 days.
2. The licensee did not perform I-131 analyses on milk at the locations determined from either the 1988 or 1989 land use census (70-687; 50-54).

This is a Severity Level V Violation (Supplement IV E).

- D. Technical Specification 3.9.2.(2) for License R-81 states, in part, that the total body dose to any individual in unrestricted areas due to noble gases released in gaseous effluents shall be limited during any calendar quarter to  $3.17 \text{ E-}8 \sum \text{Mi(K/Q)} \text{ Qi} < 2.5 \text{ mrem}$  or equal to or less than 5 mrem during each calendar year.  $\text{Mi}$  is the total body dose factor from gamma emissions for each identified noble gas radionuclide. Section 3.2.4.4 of Part 1 - Criteria of the NRC-approved license application for License SNM-639 states, in part, that the effluent stack air shall be sampled continuously and analyzed weekly for ... noble gas radioactivity. Technical Specification 3.9.3.(3) for License R-81 states, in part that liquid waste shall not be released from the site unless its activity concentration, including dilution with

non-radioactive waste water, is below that specified in 10 CFR 20, Appendix B, Table II, Column 2.

Contrary to the above, during 1989.

1. The licensee did not analyze the gaseous effluent releases weekly to identify each noble gas radionuclide present so that the appropriate total body dose factors (Mi) could be assigned.
2. The analytical techniques used to analyze liquid waste released from the site were not appropriate to assure that its concentration, including dilution with non-radioactive waste water was below that specified in 10 CFR 20, Appendix B, Table II, Column 2. (70-687; 50-54)

This is a Severity Level IV Violation (Supplement IV D).

- E. Technical Specification 3.9.3.(3) for License R-81 states, in part, that liquid waste shall not be released from the site unless its activity concentration, including dilution with non-radioactive waste water, is below that specified in 10 CFR 20, Appendix B, Table II, Column 2.

Contrary to the above, during the inspection on October 23-27, 1989, water samples of liquid waste from the 001 outfall were determined to contain  $(6.7 \pm 0.3) E-7$  uCi/ml of I-131 which was about twice the 10 CFR 20, Appendix B, Table II, Column 2 limit of  $3E-7$  uCi/ml for I-131 (50-54).

This is a Severity Level IV Violation (Supplement IV D).

- F. Technical Specification 4.8(2) of License R-81 requires, in part, that reactor pool water shall be analyzed for radioactive isotope identification at semiannual intervals. Technical Specification 4.8.3 requires that the activity of the pool water shall be measured weekly.

Contrary to the above, during 1989, the analytical techniques, used by the licensee to perform the weekly reactor pool water activity measurement and the semiannual analysis for radioactive isotope identification, were not appropriate to identify each radioactive isotope or the total activity present, in that, short-lived radionuclides were allowed to decay prior to the analyses, and the volatile radionuclides were permitted to evaporate from the samples during the sample preparation phase (50-54).

This is a Severity Level IV Violation (Supplement IV D).

Pursuant to the provisions of 10 CFR 2.201, Cintichem, Incorporated is hereby required to submit to this office within thirty days of the date of the letter which transmitted this Notice, a written statement or explanation in reply, including: (1) the corrective steps which have been taken and the results achieved; (2) corrective steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending this response time.