

E. W. Smith

1-31-61

H. E. Book

CLASS C RADIATION INCIDENT, ISOTOPE  
SPECIALTIES COMPANY DIVISION, NUCLEAR  
CORPORATION OF AMERICA, BURLINGAME, CALIFORNIA

GD:HKB

The Manager, SAN, received a written report on November 15, 1960, of an overexposure incident at Isotope Specialties Company, Burlingame, California. This report was made pursuant to 10 CFR 20.403 (e), and reported the exposure of an employee of Isotope Specialties Company to 3100 mrem in 13 consecutive weeks. The maximum exposure received in any 7 days during the 13 week period was 480 mrem. These doses were determined by film badge results, and the period of interest was the 13 weeks ending November 4, 1960.

On December 26, 1960, H. E. Book, SAN Compliance, was at Isotope Specialties Company for another purpose, and discussed the reported overexposure with Mr. John Vaden, Radiological Safety Officer. Mr. Kenneth W. Newman, General Manager, was not available at the time of the visit. Mr. Vaden said that the employee's name was Frank Connors and that he was a technician employed in the hot lab at Isotope Specialties.

Film badge records were reviewed. Isotope Specialties Company supplies a film badge service to its customers and also processes and interprets the film badges worn by its own employees. These records revealed that Mr. Frank Connors received 3100 mr of gamma exposure during the 13 week period from August 8, 1960 through November 6, 1960. During this period, the 300 mr limit in 7 consecutive days was exceeded on 3 occasions. Mr. Connors received 350 mr during the week ending August 21, 1960, 480 mr during the week ending September 18, 1960 and 435 mr during the week ending October 30, 1960. Review of the weekly doses during the period in question revealed that significant exposure had been received by Mr. Connors during nearly every 7 day period involved, but that the 3 periods noted above were the only ones where the 300 mr per week was exceeded. Mr. Vaden said that as soon as the 3100 mr accumulated dose was discovered, Mr. Connors' exposure was limited to 30 mr per week. He said this restriction applied through the week ending December 31st. Examination of badge results indicate that such a restriction had been in effect and that Mr. Connors' 13 week cumulative dose for the period ending November 13, 1960 was 3090 mr, for the period ending November 20, 1960 was 2730 mr, and on December 11, 1960 when the restriction was removed his 13 week accumulation was 2065 mr.

Mr. Vaden said that this employee was routinely engaged in the encapsulation of radioactive sources and other miscellaneous hot lab work. He also said that some of the larger doses were received while changing ion exchange columns and filters on the underwater storage pool. This pool is used mainly for the storage and manipulation of Co-60. Water from this pool is recirculated through the subject filters.

Mr. Vaden said that the employee was kept informed of his badge results on a weekly basis and was given a written notice that he was approaching the 13 week limit and that he should reduce his exposure to radiation. Mr. Vaden said that he considers it the responsibility of each employee to control his own exposure so as to stay within the specified limits. Mr. Vaden also said that the employee had been informed that the AEC was interested in the over-exposure. Presumably this was an effort to frighten the employee into reducing his exposure.

In this inspectors opinion, the action taken by Isotope Specialties Company when it was realized that this employee was approaching the 13 week limit was not sufficient. Management's responsibility is not discharged by merely keeping the employee informed. It is a management responsibility to investigate these situations and to take positive action to control the exposures. However, there is little to be gained in discussions with the company management involved. At the time of this visit, the business had been sold to U.S. Nuclear Corporation, Burbank, California, and final dissolution and transfer of the business was completed on January 15, 1951.