U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION I

Report No. 81-01

Docket No. 30-08985

License No. 29-15364-01 Priority IV Category E

Licensee: Isomedix, Incorporated

80 South Jefferson Road

Whippany, New Jersey 07981

Facility Name: Isomedix, Incorporated

Inspection At: 25 Eastmans Road, Parsippany, New Jersey 07054

Inspection Conducted: May 21, 1981

Inspectors: for Francis N. Costello
C. Rowe, Radiation Specialist — 7-6-81 date

_____ date

_____ date

Approved by: for Francis N. Costello
J. D. Kinneman, Chief, Materials
Radiological Protection Section — 7-6-81 date

Inspection Summary:
Inspection on May 21, 1981 (Report No. 30-08985/81-01)
Areas Inspected: Special, unannounced inspection of allegations from two individuals that Isomedix has conducted unsafe practices.
Results: Two apparent items of noncompliance were identified (failure to adequately monitor the discharge of licensed material into a sanitary sewer system to assure that allowable limits were not exceeded - Paragraph 5 ; failure to maintain survey records, Paragraph 4 ).

Region I Form 12
(Rev. April 1977)

DETAILS

1. Persons Contacted

*George Dietz, President
*Charles Ronk, Assistant Radiation Safety Officer
Bill McKimm, Technician, Irradiator Operator
Ronnie Rogers, Irradiator Operator

*Denotes those present at the exit interview.

2. Scope of Operation and Utilization of Licensed Material

The licensee operates a Category IV - Panoramic, wet source storage irradiator containing about 1,400,000 Ci of Cobalt-60 for the sterilization by irradiation of materials. Prior to June 17, 1980 the licensee operated 2 hot cell and an adjacent storage pool in another section of their present building. This area became contaminated from one or more leaking cobalt-60 pencils in 1976. Extensive decontamination operations were performed during 1978, 1979, and 1980 and the hot cell and storage pool area were released for unrestricted use. Decontamination was directed by employees of Chem-Nuclear Systems, Inc.

3. Summary of Allegations

In April 1981, the Region I office received letters from two former employees, that Isomedix had conducted unsafe practices and requesting an investigation of the licensees conduct. The allegations included concerns with respect to transportation of contaminated materials from Parsippany facility to one in West Orange, N.J. and back to Parsippany, disposal of contaminated pool water into toilet connected to public sewer system with resulting radiation levels in toilet, failure to give written notice to employee of exposure exceeding 3 rem in a quarter, failure to provide termination reports, failure to respond to employee complaints about poor performance of irradiator door interlocks, failure to request film badge for processing on termination of one employee and concern that contamination still existed in facility.

4. Transportation of Contaminated Material

The inspector questioned the president about activities at the West Orange, N.J. facility and the transportation of contaminated material from Parsippany to West Orange. Mr. Dietz stated that the West Orange, N.J. facility was used to store Gammator shields (housings) and hardware but had been sold in the Spring of 1980. Additionally, he stated that during the decontamination operations he became concerned that some of the tools might have accidently been transferred to the West Orange facility and sent a technician to survey the facility. His recollection of the event was that several contaminated hand tools were found and returned to the Parsippany facility The inspector interviewed the technician who stated that he spent three days conducting a survey of the West Orange, N.J. facility for radiation levels and wipe test for contamination. He stated that 2-3 spots of contamination were found and decontaminated and approximately six hand tools, (pipe wrench, spanner etc)

with radiation levels of 4-6 mR/hs were recovered and returned to the Parsippany, N.J. facility. He further stated that he failed to document any results of the survey.

The finding that survey records were not maintained represents noncompliance with 10 CFR 20.401(b).

5. Disposal of Contaminated Water to Public Sewer System

The inspector questioned licensee representatives concerning the method of disposal of contaminated water from the storage pool and hot cell. The licensee representatives stated that the water was pumped from the pool in 1976 through a resin column and filter into a 55 gallon drum where it was monitored prior to discharge into the toilet connected to the public sewer system. Licensee representatives stated that Neutron Products, Rutgers University, and a certified Health Physicist served as consultants during this operation and the actual transfer of water and sampling was done by Isomedix personnel following operating procedures provided by Rutgers University. They stated a radiation level was found at the toilet during decontamination of the facility in 1979 by Chem Nuclear. The licensee representatives were unsuccessful in an attempt to decontaminate the toilet. The contractor personnel removed the toilet which was not contaminated and measured a radiation level of 12-18 mR/hr at the top of the pipe. An 18" section of pipe was removed and spot checks were made the length of the pipe to the front of the building with no additional radiation levels detected above background. The licensee stated these survey records were maintained by the contractor. The inspector reviewed limited records available on discharge of the contaminated water to the sewer system. The procedure used was not available for review. The review of available records indicated that the licensee had failed to adequately monitor the water discharged to assure compliance with the requirements of 10 CFR 20.303 for disposal by release into sanitary sewer systems.

The finding that the licensee failed to adequately monitor the water discharged to the sewer system represents noncompliance with 10 CFR 20.201.

6. Notification of Exposure and Termination Reports

The inspector discussed the requirements for employee notification and termination reports with the licensee representatives and reviewed records of termination reports of exposure history supplied to former employees. The licensee stated that the exposure exceeding 3 Rem in one quarter had been discussed with the employee in 1979 but no written notice given after an investigation revealed that the reported overexposure occurred as a bookeeping error in calculating calendar quarters. Review of records by the inspector indicated this to be accurate. The review of termination reports on file indicated all terminated employees had received the exposure history reports required by 10 CFR 19.13.

No items of noncompliance were identified.

7. Door Interlocks

The inspector reviewed the Irradiator logs and discussed the interlock system with the licensee representatives. The licensee acknowledged that repairs to the irradiator door interlock are required approximately twice a year due to its design and the source rack cannot be raised from the pool until the interlock is repaired and the irradiator is never operated without all interlocks operating properly. The inspector verified by review of records that the interlock checks required by license conditions and regulations are made and the door interlock fails in the safe position as stated by the licensee. This does not constitute a safety problem, but rather serves as a source of aggrevation and increase in down time at the facility.

No items of noncompliance were identified.

8. External Exposure

A review of film badge records by the inspector revealed that badge #9 had been assigned to the employee in question. Records indicated that this badge had been processed by the film badge contractor for all periods of the fourth quarter in 1980 when the employee was terminated.

No items of noncompliance were identified.

9. Independent Measurements

The inspector reviewed licensee records of radiation level and contamination surveys of the facility and took independent radiation level and wipe test for loose surface contamination. Radiation level measurements were in agreement with the licensees measurements and wipe test taken revealed no removable contamination which was in agreement with the licensees results.

No items of noncompliance were identified.

10. Operator Training

The inspector interviewed management personnel and the individual named in the allegation to determine if he had operated the irradiator without supervision prior to receiving the required training. Management personnel stated that while in a trainee status individuals recorded data on the irradiator log sheets as part of their on-the-job training but only under the supervision of a qualified operator and never operated the irradiator without supervision. The individual stated that he was supervised during all irradiator on-the-job training and operated the irradiator without supervision for the first time three weeks after completion of classroom and on-the-job training and successful completion of a written examination. The inspector reviewed licensee training requirements, records of training and results of written examinations for operators and irradiator log sheets.

No items of noncompliance were identified.

11. Area Radiation Levels

The inspector reviewed records and use of check source with licensee representatives. The licensee representatives stated that the source was used to check the facility radiation alarms. Independent radiation level measurements made of the source by the inspector revealed radiation levels of 55 mR/hr contact and 1 mR/hr at one foot which were consistent with the licensees measurement.

No items of noncompliance were identified.

12. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on May 21, 1981 and spoke with Mr. Ronk by telephone on June 8, 1981. The inspector summarized the purpose and scope of the inspection and the findings.