

U.S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I

RO Inspection Report No: 75-01 Docket No: _____
Licensee: Isomedi^x Inc. License No: 29-15364-01
25 Eastman's Road Priority: III
Parsippany, N. J. Category: E
Location: _____
Type of Licensee: Irradiator
Type of Inspection: Announced Special - Amendment Pre Op
Dates of Inspection: January 21, 1975
Dates of Previous Inspection: _____
Reporting Inspector: *R. O. McClintock* 1/24/75
W. D. Allen Date
Accompanying Inspectors: _____ Date
_____ Date
_____ Date
_____ Date
Other Accompanying Personnel: _____ Date
Reviewed By: *R. O. McClintock* 1/29/75
R. O. McClintock, Senior MRPS Date

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PDR FOIA
GIDWANIB4-705 PDR

SUMMARY OF FINDINGS

The operation of the irradiator was found to conform to the representations made in the application dated August 8, 1974 and the letters dated November 15 and December 6, 1974. A clarification and expansion of operating procedures had been prepared for forwarding to DL. Review revealed that even stronger controls than previously described resulted from these changes.

The following items were included in a letter dated the day of the inspection to DL as additional controls discussed during the inspection:

1. A monthly power failure test (Details, Paragraph 2)
2. Use of a control panel maintenance log (Details, Paragraph 6)
3. Complete safety system check following panel repair or maintenance (Details, Paragraph 6)

Management Interview

At the conclusion of the inspection the inspector discussed the observations presented in this report. The inspector stated that DL would be informed of the findings and that appropriate action with respect to the amendment would be forthcoming from DL. Licensee representatives presented the revised enclosures to the letter to be sent to DL on the day of the inspection to the inspector and stated that a copy of the letter would be sent to RO:I. At the licensee's request the inspector informed RO:I of the findings by telephone so that word to DL could be passed along to expedite the issuance of the amendment, if appropriate.

DETAILS

1. Persons Contacted

G. Dietz, President
J. Masefield, President, Masefield Enterprises

2. Interlock Systems

A review of the safety system and all interlocks was performed and their operation was described by licensee representatives. The following were tested and found to properly cause the source rack to lower to the bottom of the source storage pool:

- a. With the source up the entry could not be opened.
- b. Jarring of the door while trying to open with the source rack up caused the rack to lower.
- c. The scram button on the console caused the rack to lower.
- d. When the 90 second delay in the start-up sequence was exceeded the rack could not be raised.
- e. The air supply to the lifting mechanism was shut off during rack raising and shortly after an alarm for low air pressure caused the rack to lower.
- f. During the raising of the rack the inspector and a licensee representative stayed in the irradiation room - the inspector pulled the emergency stop cord that runs the length of the maze and the room while the source rack was raising and the rack immediately lowered to the storage pool.
- g. The radiation monitor located in the maze was purposely alarmed with a check source (approximately 300 mr/hr) and the rack lowered.
- h. The pool water level floats were purposely alarmed and the source rack lowered.

All the conditions which caused the rack to lower were noted to be displayed at the control console. A reset button must be pushed in order to raise the source again. It was demonstrated that if the condition that caused the alarm was still in existence the control panel could not be cleared and the source could not be raised.

The inspector asked if the routine checks included a loss of electric power at the breaker panel. Licensee representatives stated that the scram button accomplished the same result but agreed to insure that under actual power loss conditions this area should be checked on a routine basis. The source rack was raised and the breakers were thrown and the rack immediately lowered. Licensee representatives included this check on the revised form that was being prepared to forward to DL and stated that it would be routinely checked on a monthly basis.

3. System Over-rides

The inspector asked if there were any switches or mechanisms that would allow safety system over-ride. Licensee representatives stated that the only way to override any safety system was to physically dismantle the control panel. They stated that the system was designed to prevent inadvertent override of any of the safety systems.

4. Surveys

A review of intended surveys revealed that the following have been provided for and mechanisms for records instituted:

- a. An entry log to include a radiation survey in the first ten feet of the maze.
- b. Monthly surveys of pool deionizers to detect radiation build-up
- c. Monthly smear surveys of floor, wall and exhaust duct in irradiator room (Air flow path).
- d. Monthly survey of roughing and absolute filters to detect radiation build-up.
- e. Leak tests as required by the license.

5. Radiation Monitor

The radiation monitor that is intended to detect any changes from a normal radiation level was noted to be semi-permanently installed at the first corner of the entry maze, calibrated and operative. When the sources are actually loaded the licensee will permanently locate the monitor in an area offering a field of approximately 100 mr/hr. The monitor is presently hooked into the interlock system and it was demonstrated that if a radiation level of approximately 200 mr/hr was provided the source rack would lower.

6. Control Panel

The control panel was noted to be large, with obvious alarm lights, and in an open and uncluttered area. The air cylinder and pulley system is located adjacent to the panel that allows a visual check of up and down movement of the source rack in the irradiation room.

The inspector asked if any routine maintenance was going to be performed in or on the control panel. Licensee representatives stated that they would perform maintenance as required or indicated by the routine checks. Inspector asked if any mechanism had been adopted to assure that after any required maintenance or repair a complete check of the operability of the safety system was performed. Licensee representatives stated that they had always planned to do a complete check but that they had not formally notified DL or specified this in a formal procedure.

Licensee representatives stated that they would utilize a repair log to describe any repairs of maintenance and that they would perform a complete check of the safety system following such work. They further stated that these intended actions would be documented in the letter being prepared for DL.

7. Irradiator Room

The irradiation room was noted to be large, well lit, and uncluttered. Instructions in the alarm systems and the use of the emergency source lowering cable were stenciled on the walls and easily read. The cable was at a position that even if injured an individual would be able to reach the height of the cord.

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