

APPENDIX A

NOTICE OF VIOLATION

National Aeronautics & Space Administration  
Greenbelt, Maryland 20771

Docket No. 030-06929  
License No. 19-05748-03

During an NRC inspection conducted on March 22, 1994, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violation is listed below:

10 CFR 36.1(b), states, in part, that the regulations in 10 CFR 36 (Part 36) apply to panoramic irradiators that have dry storage of the radioactive sealed sources and the dose rates exceed 5 grays (500 rads) per hour at 1 meter. The Federal Register dated February 9, 1993, required implementation of 10 CFR 36 on July 1, 1993.

Contrary to the above, as of March 22, 1994, the licensee, which possesses a panoramic irradiator that has dry storage of the radioactive sealed sources and a dose rate that exceeds 5 grays (500 rads) per hour at 1 meter, failed to implement the requirements of 10 CFR 36, which became effective on July 1, 1993. Specifically, the licensee had assumed that the deadline for implementation was not until the expiration date of their license on April 30, 1995, and although an outline of changes needed had been prepared and a work order had been submitted, completion of the changes was not required until April 30, 1995. The following specific items of non-compliance were noted within the scope of the inspection:

- a. 10 CFR 36.23(a) requires, in part, that the personnel entrance door or barrier to a panoramic irradiator must have a lock that is operated by the same key used to move the sources.

Contrary to the above, as of March 22, 1994, the same key is not used to operate the personnel entrance door and move the sources (raise the shield, exposing the sources).

- b. 10 CFR 36.23(b) requires, in part, that each entrance to a radiation room at a panoramic irradiator must have an independent backup access control to detect personnel entry while the sources are exposed. Detection of entry must cause the sources to return to their fully shielded position and must activate a visible and audible alarm to which at least one other onsite individual is prepared to respond.

Contrary to the above, as of March 22, 1994, no independent backup access control was installed at the licensee's facility.

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- c. 10 CFR 36.23(c) requires, in part, that the radiation monitor in the radiation room of a panoramic irradiator must be integrated with personnel access door locks to prevent room access when radiation levels are high. Attempted entry must activate the alarm described in 10 CFR 36.23(b).

Contrary to the above, as of March 22, 1994, the radiation monitor in the radiation room was not integrated with personnel access door locks nor would attempted entry activate an alarm as described in 10 CFR 36.23(b) when radiation levels are high.

- d. 10 CFR 36.23(d) requires, in part, that before the sources move from their shielded position in a panoramic irradiator, the source control must automatically activate conspicuous visible and audible alarms.

Contrary to the above, as of March 22, 1994, the source control did not activate visible and audible alarms before the sources moved from their shielded position. Specifically, an audible alarm was activated at the start of the room inspection procedure from within the radiation room, not from the source control. A visible alarm in the radiation room failed to function.

- e. 10 CFR 36.27(a) requires, in part, that the radiation room at a panoramic irradiator must have heat and smoke detectors that when activated must automatically place the sources in the fully shielded position and activate an audible alarm capable of alerting a person prepared to summon assistance.

Contrary to the above, as of March 22, 1994, the licensee did not have heat and smoke detectors installed in the irradiation room of their panoramic irradiator.

- f. 10 CFR 36.27(b) requires, in part, that the radiation room at a panoramic irradiator must be equipped with a fire extinguishing system capable of extinguishing a fire without the entry of personnel into the room.

Contrary to the above, as of March 22, 1994, the licensee did not have a fire extinguishing system in the radiation room of their panoramic irradiator.

- g. 10 CFR 36.31(a) requires, in part, that the mechanism that moves the sources of a panoramic irradiator require a key to actuate. The key must be attached to a portable radiation survey meter.

Contrary to the above, as of March 22, 1994, the licensee did not have the key that moves the sources attached to a portable radiation survey meter. Specifically, the key which moves the source shield (exposing the sources), was not attached to a radiation survey meter.

- h. 10 CFR 36.27(b) requires, in part, that the console of a panoramic irradiator must have a source position indicator that indicates when the sources are in the fully shielded position, when they are in transit and when the sources are exposed.

Contrary to the above, as of March 22, 1994, the licensee did not have a source position indicator on the console of their panoramic irradiator which indicated when the sources are fully shielded or when the sources are in transit. Specifically, an indicator on the source console, located near the radiation room window, indicated when the sources were exposed only. No source position (shield status) indication on the console indicated either the fully shielded position or the source transition position from fully shielded to fully exposed. The radiation room window does allow direct viewing of the source shield position.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, National Aeronautics & Space Administration is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued to show cause why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.