

MAR 30 1994

Docket No. 030-32908

License No. 29-28784-01

Shashi K. Agarwal, M.D.  
290 Central Avenue  
Orange, New Jersey 07050-3414

Dear Dr. Agarwal:

Subject: Routine Inspection No. 030-32908/93-002

This letter refers to your February 16, 1994 correspondence, in response to our November 17, 1993 letter.

Thank you for informing us of the corrective and preventive actions you documented in response to our correspondence. However, your letter has been reviewed and additional information is found to be needed.

Your response to Item K. of the Notice of Violation is inadequate. 10 CFR 35.70(h) states that the record of each survey made for removable contamination be expressed in disintegrations per minute per 100 square centimeters. Your response of February 16, 1994, states that the physicist counts wipe test samples with the dose calibrator and multiplies by  $2.22 \times 10^6$  to convert from microcuries to dpm. In your letter of November 19, 1992 to Michelle R. Beardsley of Region I, you committed to a trigger level of 2000 dpm per 100 square centimeters for removable contamination. Please demonstrate by explanation and/or calculation that the dose calibrator has sufficient sensitivity to distinguish contamination levels of 2000 dpm per 100 square centimeters.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:  
Jenny M. Johansen  
Jenny M. Johansen, Chief  
Medical Inspection Section  
Division of Radiation Safety  
and Safeguards

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PDR ADOCK 03032908  
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cc:  
Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey

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RETURN ORIGINAL TO  
REGION I  
11:07

Shashi K. Agarwal, M.D.

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bcc:

Region I Docket Room (w/concurrences)

DRSS:RI  
McKinley/amw  
*RLM*  
3/30/94

DRSS:RI  
Johansen  
*[Signature]*  
3/30/94

*Shashi K. Agarwal, M.D.*

290 CENTRAL AVENUE  
ORANGE, NEW JERSEY 07050-3414  
(201) 676-1234 FAX (201) 676-0446

To the U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

February 16, 1994

RE: Docket No. 030-32908

License No. 29-28784-01

**REPLY TO A NOTICE OF VIOLATION**

In compliance with the findings of the inspection of October 18, 1993 in our laboratory at the above address, we implemented the following controls:

A. Our physicist has given clear instructions to all individuals who enter our laboratory regarding the measures of precaution to be taken to minimize their exposure to ionizing radiation.

B. We now keep a record of all sealed sources (See attached inventory). We naturally continue to record all flow of radioactive material that we order for our tests. We now have a scheduled program for the periodical tests of survey meter, dose calibrator and surface test equipment. We employ a fully trained Nuclear Technologist as well as an experienced Ph.D. physicist. The physicist has initiated a program for the tests and all results are kept in a dedicated file, as well as a copy of the regulations and procedures.

C. The dose calibrator linearity test is scheduled for February 22, 1994.

D. We are aware of the hazard that is presented by the long-lived radionuclides Cs-137 and Co-57. Our sealed sources are a Co-57 flood source, a Co-57 source and a Cs-137 source in sealed polyethylene vials for dose calibrator calibration, and a dedicated 10 microcurie Cs-137 source for survey meter testing. These sources are all of commercial grade. We have implemented a regular program of wipe tests to assure the absence of any leakage of the sealed sources.

E. We are now using a check source which gives a 0.7 mr/hr reading on contact with the probe of our survey meter.

FEB 25 1994

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F. In the program established by our physicist, each test result will be recorded with its deviation from the calculated value obtained from the decay curve of the reference source activity level.

G. The program established by the physicist includes the signing of the documents by the Radiation Safety Officer.

H. All dose calibrator linearity tests are now signed by the Radiation Safety Officer.

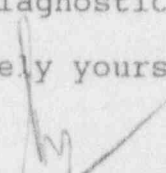
I. We are now keeping all records in the log book. The 1993 calibration of the Biodex 14C survey meter is recorded on the instrument. We will request a copy of the certificate from the testing laboratory.

J. All the leak test records are now in the log book.

K. Since the wipe test instrument in our laboratory only gives a qualitative result, the physicist now conducts the wipe tests with the dose calibrator, using the factor  $2.22 \times 10^6$  to convert from microcuries to dpm, in order to comply with the requirements.

We indicated that we would welcome a new inspection to verify our procedures and clear the way for our renewed diagnostic tests.

Sincerely yours,



Shashi Agarwal, M.D.

cc:  
Regional Administrator, Region I Nuclear Regulatory Commission  
Asim Dikengil, M.D., Radiation Safety Officer

Shashi K. Agarwal  
290 Central Avenue  
Orange, New Jersey 07050

Inventory of Sealed Sources

1. Solid 18" Diameter Cobalt-57 Flood Source, 215 MBq as of 3/26/94, Nuclear Associates Catalog No. 67-297, Serial No. 2114.
2. Sealed polyethylene vial Cobalt-57 Gamma reference standard, 5.38 millicurie as of 4/1/93, Nuclear Associates Catalog No. 67-206, Serial Number A1066. Leak test certificate: Nuclear Associates, 4/16/93.
3. Sealed polyethylene vial Cesium-137 Gamma reference standard, 201.4 microcurie as of 1/1/93, Nuclear Associates Catalog No. 67-356, Serial Number A0783. Leak test certificate: Nuclear Associates, 4/16/93.
4. Ceramic Matrix in "D" capsule 10 microcurie as of 4/15/1993 check source, Isotope Products Laboratories Catalog No. GF-137D. Leak tested 5/4/93.