THE MEDICAL CENTER
GEORGETOWN UNIVERSITY
WASHINGTON, D. C. 20007

OFFICE OF THE CHANCELLOR
202/625-7006

July 6, 1979

Mr. George Smith
Chief, Fuel Facility & Materials Safety Branch
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Smith:

This is in response to your letter of June 13, 1979 describing the results of the U.S. Nuclear Regulatory Commission inspection conducted on our campus on March 20 and 21, 1979.

For each of the four issues cited in the report we have described hereafter the corrective actions taken to date, the corrective actions to be taken in the future and the date when full compliance has and will be achieved.

Item A1 Monitoring of Radioactive Effluence:

1) Corrective Steps already taken and results achieved:

We offer the results of our actual measurements in the only two sites where iodination is carried out. In Room 321 of the Basic Science Building a measurement on 12-4-78 of iodination hood effluence showed 7×10^{-10} uCi/ml I-125. This effluence was diluted by a 1000 cfm hood flow to the roof resulting in a discharge of 2.5×10^{-17} uCi/ml I-125 to the unrestricted area.

In Room 115 of the same building a measurement on 6-26-79 during iodination using 500 uCi I-125 showed 5.5×10^{-11} uCi/ml I-125 at the discharge point to an unrestricted area. This concentration falls below MPC and no further dilution is necessary.

In addition, one investigator is using Borohydride in Tritium labelling operations in Room 321 of the Basic Science Building. This protocol uses 10^8 dpm of H-3 per event. We estimated 10% labelling efficiency and 90% release of Tritium into the hood. The hood exhausts on the roof of the building at a rate of 1000 cfm. The concentration over one minute at this flow rate equals 1.4×10^{-6} uCi/ml. If averaged over an 8-hour day at 1000 cfm the concentration would be 2.9×10^{-9} uCi/ml or 1.4% MPC for an unrestricted area. At this level of operation we estimate 68 labelling events per day could be performed without

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exceeding MPC. The estimated frequency of these events is, at most, 250 per year.

2) Corrective Steps to be Taken:

Air sampling will be taken during several labelling events and the results evaluated to assure the applicable limits are not exceeded when averaged over one year.

3) The Date for Full Compliance

Compliance now has been achieved.

Item A2 Evaluation of Extremity Dose

1) Corrective Steps Taken and Results Achieved:

The ring badge for the particular technician was not returned. Therefore, an extremity exposure of 400 mR for each period for which data is not available will be presumed.

2) Corrective Steps to be Taken:

The extremity exposure of all persons working with millicurie quantities of nuclides will be monitored monthly and cases of failure to return TLD detectors for evaluation will be individually investigated.

3) The Date for Full Compliance

Compliance now has been achieved.

Item B Failure to Survey Incoming Packages

1) Corrective Steps Taken and Results Achieved:

The staff of the Radiation Safety Office has been reinstructed as to the importance of inspecting all incoming packages prior to their delivery to the individual users. This inspection includes verification of external radiation level, if any, and the performance of a wipe test. The results of these inspections are recorded in the receipt record and an indication of the result is recorded conspicuously on the package.

2) Corrective Steps to be Taken:

The Director of Radiation Control will monitor the adherence to this policy.

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3) The Date for Full Compliance

Compliance now has been achieved.

Item C Failure to Instruct Technicians in the Moly-breakthrough Tests

1) Corrective Steps Taken and Results Achieved:

The Division of Nuclear Medicine has reemphasized the importance of this test and reinstructed its technicians in the proper performance. At the present time no generator elutions are being performed since the Division of Nuclear Medicine purchases prepared dosages of trace nuclides for patients.

2) Corrective Steps to be Taken:

The Director of Radiation Control will periodically monitor the Division of Nuclear Medicine's adherence to this procedure.

3) The Date for Full Compliance

Compliance now has been achieved.

Item D Failure to Deface Labels on Empty Nuclides Shipping Containers

1) Corrective Steps Taken and Results Achieved:

All users have been readvised by memo of the proper procedure for disposal of these containers.

2) Corrective Steps to be Taken:

Spot checks will be made periodically by the Director of Radiation Control to verify compliance.

3) The Date for Full Compliance

Compliance now has been achieved.

In addition to our commenting on the specific findings and in describing measures that have been implemented to correct those problems, we also indicate active on-going recruitment for a new director of Radiation Control. A national search has been mounted for a superior individual experienced in the theory as well as the practical application of Radiation Safety. From the number of applicants declaring interest we look forward to a successful recruitment in the next several months.

We appreciate your comments as to the Georgetown University Medical Center; your careful observations, recommendations and notation of viola-

2027 098

tions have been uniformly received in the constructive sense of constant improvement. If there are any further questions regarding our program, we would be pleased to respond to any request.

Sincerely,

MATTHEW F. McNULTY, JR., Sc.D.
Chancellor, The Medical Center

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