cetus

November 8, 1982

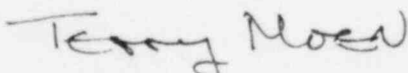
D.G. Wiedeman, Chief
Material Radiation Protection
Section 1
United States
Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Re: Licence Number 48-20256-01

Dear Mr. Wiedeman:

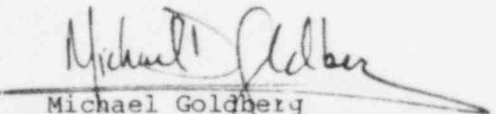
The following document is a response to your notice of violation of October 19, 1982. We hope this response provides you with sufficient data to judge our compliance. If you have any questions or need for additional information please contact the RSO (Terry Moen) at (608) 836-7300.

Sincerely,



Terry Moen
Safety & Security Officer

Winston Brill
Director of Research



Michael Goldberg
Director of Finance & Administration

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Enclosure

NOV 15 1982

Violation 1

Violation 1 States:

"...The license application dated January 7, 1982, states that major spills (spills involving radiation levels greater than 0.1 mR/hr) shall be reported immediately to the radiation safety officer or a member of the safety committee.

Contrary to this requirement, members of your staff failed to immediately notify the radiation safety officer or a member of the safety committee of the spill of phosphorus-32 on April 21, 1982, which involved radiation levels in excess of 0.1 mR/hr.

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

We believe that the determination of what constitutes immediate reporting must be made, in view of the circumstances involved in each situation. In this instance, the people involved immediately (e.g. < 1 minute) made a concerted effort to contain and clean up the spill in order to minimize any potential consequences. Reporting to the RSO occured within two hours when the emergency situation was largely under control. While it is clear from the tone of the RSO's incident report that she considered 2 hours too long a delay before notification and poor laboratory practice, we believe that it is appropriate to take into consideration the fact that the people involved are subject to the conflicting considerations at the time of an accident, between reacting immediately to minimize the consequences and contacting the RSO and thereby forgo an opportunity to prevent further harm. We have, however, taken the following actions:

On April 21, 1982 the RSO informed the individuals involved in the incident of the seriousness of their actions.

Dr. Winston Brill, Director of Research at Cetus Madison spoke to the people involved on April 22, 1982. After discussion of the incident at the Safety Committee meeting, it was decided that a copy of the incident report was to be given to each Cetus Madison Corporation employee. This was done on June 24, 1982. In discussing the incident with laboratory technicians working in the isotope lab, the RSO made it clear to them that it is their responsibility to inform the RSO or a member of the Safety Committee of any accident as soon as possible. New employees of Cetus Madison Corporation are given an extensive safety orientation which includes giving them copies of past incidents. Copies of all incidents are also filed in a notebook that all employees have access to.

The RSO received a signed statement from the scientist involved dated October 27, 1982, stating that he has read and understands the Radiation Safety Guide. A letter to Dr. Winston Brill dated November 1, 1982 from the scientist involved in this incident stating that he is aware of the seriousness of the incident is on file at Cetus Madison Corporation.

Cetus Madison Corporation feels this situation has been remedied by our past actions as set forth above and by our safety orientations in the future, and that incidents will be more quickly reported to the RSO as a result.

Violation 2

While re-reading the NRC letter of February 5, 1982 (B.J. Holt; NRC; Region III), with Mr. Reichold which states, "Please expand your Guidelines for Handling of P-32" to include the following: c) A mandatory radiation survey and wipe test procedure after each use..." it became clear that our interpretation on wipe tests was incorrect and we should have been conducting wipe tests after each use of 32P (routine monitoring). This condition was remedied on October 27, 1982 with the formating of the 32P daily monitoring log to include a column indicating the results of the wipe test. In addition, on October 22, 1982, all scientists working with radionuclides were given copies of the NRC October 19, 1982 document. The RSO discussed the problem with them and told them about the change in procedure with the daily 32P log. The RSO also discussed this problem (on October 27, 1982) with all technicians using radionuclides. The new format will be covered in all future safety orientations of workers using radionuclides. The RSO will review proper recording procedures. Through these actions Cetus Madison Corporation feels it is now in compliance.

Violation 3

While hands, feet and clothing were monitored by individuals using radionuclides at Cetus Madison, this action was not reflected in our daily monitoring log books. This condition was remedied on October 27, 1982 with the formatting of all the daily monitoring logs to include two new columns: 1) hands and feet, 2) clothing, which have to be filled in

by each user. In addition, on October 22, 1982 all scientists working with radionuclides were given copies of the NRC October 19, 1982 document. The RSO discussed the problem with them and told them of the change in procedure with all of the daily monitoring logs. The RSO also discussed this problem on October 27, 1982 with all techr _ians using radionuclides. The new format will be covered in all future safety orientations of workers using radionuclides. The RSO will review proper recording procedures. Through these actions Cetus Madison Corporation feels it is now in compliance. (A photocopy of a formated log book is attached).

(^{35}S monitoring log) 10 - 27 - 82

The NRC has made recommendations that has caused a change in the format of this log book. Please note that all areas must be monitored at the end of the day or end of the experiment - which ever is 1st. While ~~the~~ the counter with the β-Scintillating probe is useful for detecting spills, it is not sensitive enough to pick up minor contamination. All monitoring of the area, hands, feet and clothing must be done using a scintillation counter and the actual number of counts recorded - Background must also be recorded. Because 32P is also used in the same area of the lab it is useful to survey the area before use with a geiger counter. Record the # of the geiger counter (1-6) and also record the letter for the scintillation counter (A or B)

Counters and Probes

1	18490	PR 5625
2	20169	PR 3747
3	21382	PR 5763
4	20131	PR 3746
5	20175	PR 3748
6	20216	PR 6102

The scintillation counters are labeled A & B

A in the South Lab
B in the Centrifuge corridor

Date	name	Counter #	area before using	area after use (cpm)	hands & feet (cpm)	Clothing (cpm)	Bkg level (cpm)	Scint Counter [illegible]	Comments