

Docket Nos. 30-0882  
30-3287  
40-5259  
70-0391

June 13, 1980

Mr. Hilbert W. Crocker, Acting Chief  
Materials Radiological Protection Section  
U. S. Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Dear Mr. Crocker:

Re: Inspection - 80-01

This is in response to your letter of June 9, 1980, which we received on June 12, 1980, summarizing the observations made by Mr. B. O'Neill of your office during his inspection of May 20 and 21, 1980, of those activities at Princeton University authorized by NRC license numbers 29-05185-24, 29-05185-25, SNM-356, and SUD-381. We acknowledge receipt of the notice of violation, Appendix A of your letter, which details one infraction of the Nuclear Regulatory Commission's regulations relative to the activities authorized under the license 29-05185-24. Our position regarding the inspector's observations and the violation cited, the understandings reached during the concluding interview, and the corrective actions taken or planned to prevent reoccurrences of the infractions are described below.

Regarding the infraction:

"Surveys - 10 CFR 20.201 (a) and (b); and Concentrations in effluents to unrestricted areas - 10 CFR 20.106"

Our position regarding this item is that we are and have been in compliance with the requirements of 10 CFR 20.106 regarding concentrations of Iodine-125 released to unrestricted areas from ventilating stacks. We do concede that we have not performed enough evaluations nor are we in possession of sufficient contemporary data to unequivocally establish that fact. We are taking immediate steps to correct that deficiency. The citation, as required, is being posted this date and the implications and significance of the citation will be discussed with all of the Iodine-125 users today or within the next week. Concurrently, we are taking immediate steps to supplement our existing instrumentation for such evaluations, primarily to improve

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the efficiency with which that work can be done. In addition, detailed discussions are planned within the next month with each of the radioiodine users to further explain the significance of the citation, the implications for future research work, and the necessity for a vigorous sampling program which will require their close cooperation. During these discussions we will gather additional information such as types of iodinations and frequency with which they are performed, the quantities of iodine used and similar data necessary for the planning and implementation of an extensive monitoring program. We expect to initiate a full scale, on-going iodination monitoring program no later than September 1, 1980. We, of course, do expect to perform some sampling prior to that date but cannot make a firm commitment since there may be no iodinations during the summer months. Many of our life scientists spend the entire summer at Woods Hole and level of isotope usage, in general, tends to diminish during the summer months. Even during the academic year iodinations and other work with large quantities of iodine are performed infrequently. We expect that it will take approximately one year (June 1, 1981) to obtain sufficient data from a representative number of iodinations to enable us to unequivocally demonstrate compliance. We are making a commitment to initiate and maintain a vigorous and adequate program of radioiodine effluent monitoring. We are not promising, however, to monitor every single radioiodination done at Princeton University. We are committed to ensuring and demonstrating compliance with 10 CFR 20.106.

We acknowledge and confirm the understandings reached during the discussion at the conclusion of the inspection. Specifically:

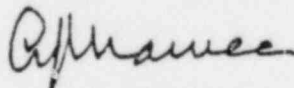
We will, as agreed, improve the audit program. As was pointed out to your inspector, we have improved the program over the past two years but we do agree with the inspector's observation that it is not comprehensive enough. Incidentally, we had reached that conclusion ourselves several years ago and we have attempted to improve the program over the past 16 months. It has not been possible to entirely realize our goal as a result of external circumstances, a number of special health physics projects, and a requirement of your licensing branch that we re-evaluate a number of our internal procedures and rewrite the "Radiation Safety Guide" as a condition for favorable action on our Broad License renewal application. The special projects included health physics coverage and assistance in the disassembly and transportation of the defunct Princeton

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Particle Accelerator to the Fermi Laboratory and the relocation of one of our major departments into the new Biochemical Sciences Building. Both of these required extensive health physics coverage and involvement. An external circumstance which seriously interfered with our normal operation was the national crisis in the disposal of radioactive waste and the subsequent closing of the Richland burial disposal site used by our waste vendor. Since the amounts of each isotope authorized by this office normally run close to 80% of the University's possession limit and since special storage space on campus is severely limited, interruption of the normal waste disposal procedure created a serious problem. Contingency plans had to be developed to cope with this situation and all of this under the real threat that it might be necessary at some point to cease working with isotopes altogether. The Richland site was reopened and the situation has normalized somewhat, but since then the health physics and research staffs have had to contend with continually changing instructions from the vendor and the burial site with respect to proper packaging. Aside from the radioactive waste disposal problem, which we suspect is chronic, we are looking forward to a more normal year. Consequently, subject to the constraints of what is humanly possible, we are committed to making substantial improvements in the audit program. The radioiodine monitoring described above will in itself help.

I trust this response satisfies the concerns and observations noted by your inspector. We appreciate the care and professionalism which characterized the inspection performed by Mr. O'Neill. We are especially appreciative of the constructive suggestions he made during the course of the inspection. We will continue to do everything we can to maintain our high standards in this important activity.

Sincerely yours,



A. J. Maruca

cc: U. S. Nuclear Regulatory Commission  
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