



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Bureau of Standards**  
Washington, D.C. 20234

November 4, 1982

Mr. Richard W. Starostecki  
Director, Division of Projects and  
Resident Programs  
U. S. Nuclear Regulatory Commission  
Region 1  
631 Park Avenue  
King of Prussia, PA 19406

Subject: Inspection Report No. 50-184/82-02

Dear Mr. Starostecki:

This is in response to the item of apparent noncompliance contained in the above subject inspection report. NBS respectfully disagrees that the activity associated with this item is in noncompliance. NBS believes that the conclusions arrived at by the Commission were based on insufficient information. This is because NBS was not informed until several days after the inspection was completed, and after several telephone conversations, that the Commission had reconsidered its earlier position and reversed the determination presented at the exit interview that there were no items of noncompliance.

NBS does not permit anyone, including experimenters, free access to the facility unless, among other requirements, they have initially received reactor access and radiation protection instructions given by NBSR Health Physics. Re-indoctrination is required biennially. All others must be escorted into restricted areas by a qualified individual. In this specific instance the experimenter had been trained in the use of the pneumatic facilities and subsequently checked out by a reactor supervisor, only then was he put on an approved list of users. In addition, because the experimenter had not received regular NBSR access and radiation protection instruction, he was being escorted by another reactor supervisor, who supervised the activities of the experimenter. In summary, the following facts, not all of which were previously known, are provided:

1. The individual was checked out on the pneumatic facility and was on an approved list of users. Prior to being put on the list, he received training by working with experienced personnel who instructed him in the operation of the pneumatic facilities and the handling of samples.
2. The individual used gloves in handling operations, transferred the sample using handling tools and correctly followed other procedures associated with the use of the facility.
3. The individual was being accompanied specifically by a very knowledgeable and experienced reactor supervisor, who monitored his activities.

4. The sample was reading approximately 12 mR/min on contact. The individual's gloved hand had contact with the sample for only an instant. The exposure to the hand was negligible. The individual was provided with two dosimeters both of which showed zero exposure.
5. Contrary to the inspection report, airborne activity within the hood would be detected by the hood's filter monitor which is equipped with both local and remote alarms. Thus the statement that the air inside the hood was not contaminated was correct. Notwithstanding the above, even when a hood contains no airborne contamination, it is not common practice at NBS to insert one's head inside a fume hood. In this regard, the experimenter states that he does not recall inserting his head into the hood and both NBS staff members observing the operation do not recall noticing it.

NBS believes in and has instituted a strong and effective radiation protection program that assures the safety of all and keeps exposures to a minimum. NBS is always looking for ways to extend and improve its program beyond existing requirements. As an example of this, NBS instituted in March of this year, specialized instruction designed specifically for experimenters and users above that normally required.

NBS shared the concern of the inspector that certain actions of the experimenter may not have been considered good radiation protection practice. As a result, he was immediately removed from the authorized users list. Furthermore, instructions were issued to reactor supervisors not to put anyone on the authorized users list unless they have had the reactor access and radiation protection training referred to above. All of these actions were taken prior to any action by the Commission. The experimenter in question was subsequently given both the regular and special radiation protection instructions. He was checked out again on the use of the pneumatic facilities by both a reactor supervisor and a health physicist. His name was returned to the authorized users list.

NBS strongly believes that it carried out its responsibilities and obligations under the regulations in a conscientious manner, and that, while the activity may not have been good practice, there was no noncompliance. This is consistent with the determination of the NRC inspector during the exit interview. In this regard, NBS is very concerned about the circumstances leading to the NRC report. The exit interview was opened by a statement made by the inspector that he had found no items of noncompliance. He only had certain areas of concern, which NBS shared and promptly corrected. It was not until the third day, following several telephone conversations in the interim, that NBS was notified by telephone that the inspection report would include an item of noncompliance. NBS believes that it was not given the opportunity to determine all of the facts, and consequently, as indicated earlier, the decision of the Commission was based on incomplete information.

Sincerely,

*Robert S. Carter*

Robert S. Carter  
Chief, Reactor Radiation Division