



UNION CARBIDE CORPORATION  
MEDICAL PRODUCTS DIVISION  
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September 11, 1979

U. S. Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Attn: George H. Smith, Chief  
Fuel Facility & Materials Safety Branch

Subj: Inspection 50-54/79-02

Dear Sir:

The report of the above referenced inspection identified certain activities that allegedly were not conducted in full compliance with NRC requirements. Our comments on these inspection findings are respectively as follows:

ITEM A:

The 55 gallon drum referenced in your letter has been posted with a "Caution-Radioactive Materials" label as a precaution for individuals working in the vicinity of the drum. So that further deficiencies of this type will not occur in the future, the Health Physics group has completed a search of licensed areas to verify correct labeling and to update worn or faded postings.

More importantly, a memorandum has been issued to all personnel reminding them to be on the alert for unmarked storage of radioactive materials on site and to label these areas or bring them to a supervisor's attention so that they may be properly posted.

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ITEM B:

The Operations group has been reinstructed in the requirements for maintaining radiation areas properly. This training emphasized the importance of maintaining the proper posting of radiation warnings, including posting of the cautions for contaminated areas. In addition, the heat exchanger hallway as well as the entire upper level of the pump room has recently been decontaminated and painted so as to help cut back on removable contamination in the pump room area.

The license representative who entered the heat exchanger hallway trusted that the reversed contamination posting was, indeed, correct. Although this was not the case, the consequences of entering the area without benefit of protective shoe covers was trivial. This was evidenced by the negative test for shoe contamination for the licensee representative and NRC inspector upon leaving the reactor building.

Nevertheless, we do not consider incorrect posting of radiation warnings to be a minor matter and our retraining efforts have emphasized this concern.

ITEM C:

While it is true that an air grab sample was not taken during the ion exchange filter replacement job cited, the operation was benefited by a continuous air sample. This particular air sampler in the pump room is just one of twenty-one located at strategic locations throughout the reactor and hot lab buildings which sample 24 hours per day.

The pump room air sample for 12 March 1979 indicated no detectable activity. Assuming that the work in the pump room took one-half hour, the exposure to the employee changing the filter would be less than 1/20 MPC-Hour assuming iodine-131 to be the isotope of concern. This quantity represents approximately 1/10000 of the permitted quarter year intake of 520 MPC-Hours (i.e. 13 weeks x 40 MPC-Hours/week) and is therefore, insignificant.

In addition to this evidence, all grab air samples taken for this particular job in the past have shown negligible airborne radioactivity. The most recent evaluation in May 1979 taken with a high volume air sampler indicated an airborne iodine-131 exposure of approximately 1/100 MPC-Hour to the individual performing the job.

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ITEM D:

Upon further investigation of the exposure received to the referenced employee for December 26, 1977 through January 8, 1978, a Landauer film badge report was located which indicated the employee's exposure to be 20 mRem for this period of time. Apparently, this particular film badge result had been overlooked in the process of transferring the film processor values to this individual's exposure record.

In order to prevent a recurrence of such record keeping errors, we have instituted a policy that no gaps in the exposure record will be permitted for any unusual length of time. In lieu of a film result, an estimate of the exposure will be based on daily dosimeter readings and the results immediately logged.

ITEM E:

The frequency of urineanalysis for radiation employees has been annual in the past, as noted. However, because of the vast quantity of negative urineanalysis and air sampling data collected over the years, we feel that a continued formal urineanalysis program for the reactor facility is unwarranted.

We will continue to request bioassay analyses (either body counting or urineanalysis techniques) for persons who have been exposed to significant airborne radioactivity. However, these analyses will be performed on a case by case basis since our routine continuous air sampling program indicates exposures significantly below 25% of the airborne radioactivity concentration guidelines.

The new Technical Specifications for the reactor facility (effective September 1979) reflect this philosophy and do not impose a periodic urineanalysis requirement.

ITEM F:

An evaluation of the percentage of I-133 released is presently being performed and documented. The evaluation had not been formally documented previously although measurements addressing this concern have been performed in the past. The experimental results should be completed this week, and the results will be available for your next inspection or earlier if desired.

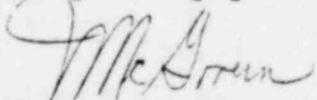
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In order to prevent a recurrence of an oversight in a formalized follow-up on an unresolved item, each future unresolved item will be assigned to a specific individual who will have responsibility for carrying it through to completion.

All of the above corrective actions either have been or will have been accomplished within one week after this response.

Very truly yours,



James J. McGovern  
Business Manager  
Radiochemicals

LCT:js

cc: Dr. R. E. Bollinger  
D. B. Holzgraf  
C. J. Konnerth  
L. C. Thelin  
M. H. Voth

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