

NOTE TO: Document Control
Room 016

FROM: Phillip Plato

Please place the attached document in the PDR using the following file and file points:

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SD Task No. _____
NUREG Report _____
Contract No. _____

Subject: Progress Report No. 21,
Contract No. NRC-01-77-180,
June, 1979.

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THE UNIVERSITY OF MICHIGAN

SCHOOL OF PUBLIC HEALTH

ANN ARBOR, MICHIGAN 48109

Department of Environmental
and Industrial Health

MEMORANDUM

TO: Robert Alexander
FROM: Phillip Plato
DATE: July 6, 1979
RE: Progress Report No. 21, Contract No. NRC-01-77-180, June, 1979.

Results of Test #2

To date, 36 of the 59 processors (61%) have submitted their reported doses for Test #2. The attached tables show the individual performance of all processors for whom we have results.

Although the number of processors reporting results for Test #2 has doubled since last month, the average performance for the various intervals and categories has not changed significantly as shown in Table 4. Substantial improvement in Test #2 compared to Test #1 can be seen in Categories I, II, III, and IV.

The pilot study has provided calibration sources that, for some processors, were not previously available. A good example is the accident intervals in Categories I and II. Test #1 reflected the state of the art before the pilot study when few processors bothered to calibrate above a few rem. The improvement in the accident intervals (interval 1 in Categories I and II) reflects calibration data provided to the processors during Test #1.

Please note the Test #2 results for processor #18. They are the first processor to pass all eight categories!

Calibrations

During June, we sent a report to NBS on our calibration of our two Shonka-Wyckoff ionization chambers. Since we did not know the calibration factors previously determined by NBS for these two chambers, our report to NBS was meant to serve as a quality control check on our calibration abilities. We recently learned that most of our calibration factors agreed to within 1% of those measured by NBS. We discovered one error of omission made by NBS and we differed with NBS by about 3% for

one of our calibrations. In view of the latter two problems, we are repeating all of our calibrations.

Pilot Test Phase Report

Our contract for the pilot study requires that we submit a Pilot Test Phase Report which contains the delivered and reported doses and pass/fail analysis for each of the 21,000 dosimeters irradiated as part of the pilot study. We have altered our computer program so it can produce a processor's report (delivered and reported doses, together with all of the pass/fail statistical calculations) without the processor's name appearing. We have begun making these no-name copies for you as part of the Pilot Test Phase Report which will be a 3500 page document.

Complaints

Two processors questioned our delivered doses in Category II (high energy X rays) and in Category III (low energy X rays). In each case the processors who were also irradiated at the same time were checked. The results of our review supported our delivered doses. Our procedure of irradiating dosimeters from six different processors simultaneously continues to be helpful when a processor challenges a delivered dose.

Site Visits

During May, Dr. Hudson and I visited eight of the major commercial processors to determine why they were not showing a significant improvement in Test #2 over Test #1. Our report on these visits was sent to you with a copy to each of the eight processors we visited. We recently received a letter from one of the eight processors in which they expressed some problems with our report. A copy of their letter, with the processor's name removed, is attached.

The processor asked if clerical errors made by the contractor (us) were included in our analysis. Our policy concerning clerical errors has always been that:

1. If the error is ours and is called to our attention, we will either correct the problem or void the dosimeters in question.
2. If the error is the processor's, we will not change their reported doses since this would undoubtedly not be allowed in a future mandatory testing program.

The processor also criticized the tone of our report which they thought concluded that there is nothing wrong with the HPSSC Standard, only with the processors. Our report summarized our observations and, in fact, this processor was an exception to the general summary. Although we are not prepared to retract any of our conclusions in the report, we are concerned that the site visit report is being viewed as the final report on the pilot study. It is not. It only summarizes our general observations of these eight processors. We are still analyzing the mountains of data the pilot study has generated and we are listening to the comments of the processors such as the comments expressed in the attached letter. Our final report, due in September, will contain all of our recommendations and conclusions concerning the Standard.

Finally, the processor has a suggestion for a national standard dosimeter which you might find interesting.

Summary

The pilot study is on schedule. We are continuing our data analysis efforts required for Task 3.

Phillip Plato

Phillip Plato

PP/mf
Enclosure

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