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September 23, 1949

**THE COLLECTION OF INFORMATION RELATING EXPOSURES TO
POTENTIALLY HAZARDOUS ENVIRONMENTAL FACTORS AND MEDICAL FINDINGS.**

1. Many of the environmental factors associated with AEC operations may cause injurious effects, even at lower levels of exposure, which may not become evident for a number of years.
2. It is important that there be a record system which will permit the evaluation of quantitative environmental factors in relation to cumulated medical findings in order that injurious effects may be detected as early as possible.

For example, had a systematic and serial scrutiny of the individuals exposed to B naphthylamine been made, the identification of that material as a cause of bladder tumor might have been possible many years earlier. As a result, the exposure to harmful concentrations of some hundreds of individuals, many of whom subsequently developed neoplasms of the bladder, might have been prevented.

3. The present systems for recording information relating hazardous exposures to medical findings vary greatly in the AEC installations. In some facilities, for example, elaborate records are kept of radiation exposures, but these are not routinely summarized and brought together with the medical records. In others, although good environmental analyses have been made, it is difficult, if not impossible, to relate them to the individual's specific experience.

In no instance this far examined is there a routine and systematic correlation of environmental factors and medical findings. Even with the best of the present record systems in force, such a correlation would be difficult.

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The proposed study of the termination records of employees at Oak Ridge Operations, in my opinion, would not develop information sufficient to justify the effort and expense involved.

COLLECTION RG 326

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September 22, 1949

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**THE COLLECTION OF INFORMATION RELATING EXPOSURES TO
POTENTIALLY HAZARDOUS ENVIRONMENTAL FACTORS AND MEDICAL FINDINGS.**

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- a. The data with respect to medical findings and environmental analyses are grossly inadequate and so poorly organized as to make impractical the collection for statistical purposes.
 - b. With respect to uranium and gamma radiation exposures, other areas have been associated with much higher levels of exposure, and so far as the majority of the Oak Ridge terminated employees, with greater duration of exposure. Since there has been no instance of injury associated thus far with this greater exposure, it is unlikely that anything of significance would be found in the survey of these terminated employees.
4. A continuing study of individuals presently employed on AEC operations, either with current exposure or who have had considerable past exposure capable of at least a reasonable estimate as to magnitude, would offer the greatest opportunity for the detecting reliable injury. In developing such a program the following factors should be considered.
- a. As many as possible, preferably all, of the AEC operations should contribute data on exposed individuals.
 - b. A uniform record system, suitable for statistical treatment, should be adapted. This might be in addition to any of the record forms now in use, and should be developed by the cooperation of project personnel responsible for executing the records and biometricians who are to collect and analyze the data.
 - c. The record should contain the pertinent environmental data, summarized at frequent intervals and expressed in as quantitative terms as possible.
 - d. Data on absenteeism, particularly absenteeism due to illness, should be included.

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