

Oak Ridge Health Study Document Summary Form

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ABSTRACT: <i>This document contains buildings surveys for gamma radiation in room air from buildings. New Chemistry; Site A; Site B Annex and Armory. This document states that air samples for uranium was taken from the buildings and it gives readings in m/hr but details are not given.</i>	
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REPORT OF HEALTH DIVISION

for

MONTH OF MAY 1945

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This document has been approved for release to the public by:

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Medical Hazards Section - Section III

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000 MLH 3250 Special Hazards Survey of Sub-Contractors and
Associated Projects

During the month the betatron installation at the University of Illinois was inspected by members of the Health-Physics group. In many areas radiation levels far in excess of tolerance were noted. For the most part the work areas for the individuals running the machine were below tolerance. Areas which exceeded tolerance included regions in which persons not familiar with the installation may be working. Because of this fact recommendations were made to responsible persons at this University for increased shielding or for an adequate system of warning individuals away from such areas while the machine is running.

241 MLH 3310 Building and Equipment Surveys for Beta Radiation -
Rose, Wallace

241 MLH 3320 Building and Equipment Surveys for Gamma Radiation -
Rose, Wallace

New Chemistry. The extent and amount of beta and gamma active materials being handled in the filtered air section of New Chemistry has increased during the recent past. For the most part the shielding, though temporary, has been adequate. Designs are being completed for a permanent hot lab which can handle up to 30 curies of 1.0EV gamma activity.

As an example of the sort of activity being handled, a recent extraction of an isotope of uranium in room 6 can be cited. O2 slugs whose total activity ran into several hundred curies were processed during a period of several weeks. The shielding installed was adequate for the job. Certain areas adjacent to the chemical equipment had greater than tolerance levels. However, the personnel were aware of the fact and governed themselves accordingly.

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On the 14th of April a spill occurred in the dissolving cave due to the breaking of a dissolving flask. The active solution spilled into a steel tray at the bottom of the installation. During the removal of the spilled solution, measurements of several hundred mr/hr were obtained from the temporary equipment used during the operation.

While the personnel involved were careful to conduct themselves in accordance with safe practice for handling active materials, the incident serves to emphasize the need for adequate facilities for handling very active materials. One cannot expect to handle high activities over long periods of time with makeshift equipment without getting into serious difficulty at one time or another.

Site B. Air samples for uranium were taken near the vertical cutamatic machine during the past month. Values well in excess of the tolerance amounts were obtained. As a result of the finding recommendations were made for more adequate ventilation.

Routine surveys for beta and gamma contamination continue to show the presence of uranium rather diffusely throughout the building. The most active areas are in room 103.

Site B. Annex No marked changes had been noted in this area during the past month. Rooms 160 and 161 routinely show numerous areas with above permissible levels of activity. For the most part, however, the levels noted do not exceed tolerance. Each week approximately 20 air samples for beta and gamma contamination are taken in these areas. No reading in excess of permissible levels has been found.

Armory. A complete survey of all the rooms in the Armory was done on April 26, 1945. No areas of unknown activity were found on the survey.

The south courtyard of the Armory was surveyed during the month. Beta and gamma activity can be found almost everywhere in this area. The readings noted range from 0.2 to 200 mr/hr. The higher readings were due to the presence of pellets used by the shot-gun crew which had, through error, somehow found their way into the Armory courtyard. These have been removed.

[REDACTED]