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Radioactivity Tests Take Convicts Breath Away

Argonne National Laboratory scientists are taking the breath away from Stateville Penitentiary convicts—all in the interests of radioactivity.

The scientists are collecting the breath of volunteer prisoners in a Rube Goldberg-like machine to measure the radon gas given off by the radium content of their bones.

By this test—expected to take at least a year—the atomic experts hope to determine:

1—How much radioactivity can be discharged into the air and into streams of water by the atomic plants of the future.

2—How much plutonium or other man-made radioactive elements can be taken in by the human body and how much is expelled through breathing.

The experiment—which does not harm the volunteers—is a preface to setting up safeguards for the future atomic indus-



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never varies and the convicts never drink any other kind of water.

The experiment is under the general direction of Brues and L. D. Marinelli and John E. Rose of the radiological physics division. Carrying out the radon measurements at Stateville are Andrew F. Stehney and Henry F. Lucas Jr., chemists.

Other scientists on the project are Charles E. Miller and Robert E. Rowland, physicists; William P. Norris, biochemist, and Dr. Robert J. Hasterlik, of the Argonne Cancer Hospital.

try. From its results science will be able to measure proper levels of radioactive wastes which will flow into areas around atomic industry.

As Dr. Austin M. Brues of the division of biological and medical research, explained Monday:

"We know the effects of radium intake in human beings. Until now, however, we do not know how much radon is discharged from the human body.

"Radium is present in drinking water. Right outside our back door at the Argonne Laboratory we find that the drinking water, all from deep wells, contains about 50 times more than does Lake Michigan water. We know that this a perfectly safe amount. Because there is more here than anywhere else where we have investigated we are conducting the experiments here."

The scientists found that the breath samples of the convicts are ideal for their experiment. For one thing, the Stateville drinking water radium content

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