

Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

Date: January 6, 1994

To: T. H. Row

From: J. A. Setaro *JAS*

c: F. C. Kornegay, J. H. Swanks

Subject: Undocumented Medical Experiments

REPOSITORY Oak Ridge / Energy Systems / ORNL
(X-10)

COLLECTION DIRECTOR'S FILES

BOX No. BUD 4500 N

FOLDER _____

In response to inquiries about undocumented medical experiments involving radioactive materials, I would like to submit the following:

Sometime in the mid-1960s, a young girl (approximately 16 years old) was involved in a motorcycle accident near Crossville, TN. As a result of the accident, one of her femurs was knocked out of her body. The highway patrolman investigating the accident found the bone and, acting in accordance with Highway Patrol procedures, sent the bone along with the victim to the local hospital. The patient was transferred to UT hospital at Knoxville (along with the femur). At this point it was generally assumed that amputation would be the only course of action, but an orthopedic surgeon wanted to try to reinsert the femur into the body. His problem was that he could not sterilize the bone without ruining it (autoclaves would dry the bone out and this was the only method available at that time). The surgeon kept the patient in traction while he thought about it and consulted with his brother at Johns Hopkins. His brother suggested that he contact ORNL to see if there were any innovative way to sterilize the bone.

The surgeon contacted the Laboratory and was referred to Homer Huph (who was working in the group now headed by F. F. Knapp) in the old Isotopes Division. This was brought to the attention of J. H. Gillette (Division Director of Isotopes Division) and Art Rupp (Deputy Assistant Laboratory Director for Support and Services). It was

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thought that we might use gamma radiation to sterilize the bone and could use the Cobalt-60 Garden in Building 3029 to accomplish this. Tests were made with cow bones to determine the exposure time and the femur was triple bagged (with saline solution in the inner bag) and irradiated for the required time. Since it was impossible for Health Physics to smear the bone (this would introduce bacteria and thus ruin the bone for reinsertion), HP was not consulted in this matter. Instead, after removing the bone from the garden, the outer bag was removed and the middle bag smeared to assure the absence of contamination, and the femur was transferred, still enclosed in two plastic bags, to Homer Huph who transported it to UT hospital.

The bone was successfully reinserted into the girl's leg. The last I heard, she had a limp but had recovered. She used to send Christmas cards to the Isotopes Division for a couple of years after the surgery.

The story was publicized in the Knoxville Journal, but as far as I know there was no technical paper written on this.