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Human Research Projects

Charles W. Edington, ER-71
Associate Director, Office of Health & Environmental Research
Office of Energy Research
DOE Headquarters

REFERENCE: DOE-HQ Memorandum dated June 27, 1984, "Request for Information on Human Research"

Your referenced memorandum requested information concerning human research projects. The attached forms provide the requested information for this area.

Any questions on the attached information may be directed to J. H. Barry, FTS 583-0193, of my staff.

Original signed by
Troy E. Wade II

Troy E. Wade II
Manager

Attachments (2)

REPOSITORY INEL
ASSURANCE DIVISION, REFERENCE MATERIAL,
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INEL HRE TEAM FILE CABINET, NORTH HOLMES COMPLEX III EAST
BOX No. FOLDER: INEL HUMAN RESEARCH PROJECT
LETTER TO CHARLES W. EDINGTON FROM TROY E. WADE
FOLDER REFERENCE: DOE HQ MEMO DTD 6/27/84 "REQUEST FOR INFORMATION ON HUMAN RESEARCH"

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GCBowman:jh JHBarry RJBeers JPHamric JHSpickard NCAquilina TEWade
7/23/84

FACTSHEET HUMAN EXPERIMENTATION

Project Name: Controlled Environmental Radioiodine Tests
Date Started: May/June 1963
Date Terminated: November 1965

Identification:

Principal Investigator(s): C. A. Hawley, Health and Safety Division
ID-AEC

Responsible Government Official(s):

Objective(s) of Test: To obtain quantitative information on the kinetics of radioiodine transport from the point of release to the atmosphere through the entire air-vegetation-cow-milk sequence in the human food chain.

Short Description: The preliminary experiment was conducted during May and June of 1963. The experiment was conducted near the southern boundary of the INEL (formerly the NRTS). Approximately one curie of Iodine-131 was released atmospherically, and deposited on pasture area downwind from the release point. Six dairy cows were placed on the contaminated pasture and seven human volunteers consumed portions of the resulting contaminated milk over an 18-day period. Full details of the experiment have been published in IDO-12035.

During September 1964, approximately the same quantity and chemical form of Iodine-131 was atmospherically released to an area designated the Experimental Dairy Farm located on the INEL (approximately seven miles northeast of the Idaho Chemical Processing Plant). Three human volunteers were on the test area during the time of cloud passage and were later subjected to inhalation thyroid dose measurements. Full details of this experiment have been published in IDO-12047.

During November 1965, the 1964 experiment was repeated using similar quantities and forms of Iodine-131 in the same area. Seven volunteers were seated in the test area next to high volume air samplers to correlate inhalation uptake with the amounts of iodine present in the air. Full details of this experiment have been published in IDO-12053.

Follow-up Data: Due to the relatively short half-life of Iodine-131 (eight days) and the low thyroid doses received by the human volunteers (ingestion dose, range 230 to 630 mrad; inhalation dose, range 6.1 to 15 mrad) no follow-up data acquisition was considered necessary.

References:

1. IDO-12035, "Controlled Environmental Radioiodine Tests at the National Reactor Testing Station," C. A. Hawley, Jr., C. W. Sill, G. L. Voelz, Health and Safety Division, ID-AEC, and N. F. Islitzer, U.S. Weather Bureau, Issued June 1964.
2. IDO-12047, "Controlled Environmental Radioiodine Tests at the National Reactor Testing Station, 1965 Progress Report," C. A. Hawley, Jr., Editor, Health and Safety Division, ID-AEC, Issued February 1966.
3. IDO-12053, "Controlled Environmental Radioiodine Tests, Progress Report #Two," D. F. Bunch, Editor, Health and Safety Division, ID-AEC, Issue August 1966.

Attachments: References attached.

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