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WASHINGTON, DC 20515

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March 7, 1986

The Honorable John Herrington
Secretary
Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Secretary Herrington:

In January 1985, the Department provided the Subcommittee with documentation on the subject of human radiation experimentation (Letter from Robert C. Odle, Jr., Acting Assistant Secretary for Policy, Safety and Environment, to Subcommittee Chairman Ottinger, January 2, 1985). I appreciate the extensive documentation provided.

The Subcommittee staff has recently completed an initial review of the documents. As I am sure you recognize, some of the documentation was incomplete, and further clarification is necessary in many cases. I would appreciate your answers to the questions below. References are made to cases using the Category and Number designations which the Department assigned in its January 1985 response.

1. Category 1.002, Number 118 describes an experiment in which elderly subjects were given doses of radium and thorium. Subjects were obtained from the Age Center of New England, Boston.
 - a. What was the nature of the Age Center? Specifically, was it a retirement center or nursing home?
 - b. Who was the responsible administrator of the Age Center at the time of the experiment?
- ✓ 2. Category 1.003, Number 12 describes an experiment in which polonium was administered to hospital patients.
 - a. The polonium isotope administered was not specified. Was it Po-210, the most readily available isotope at the time?
 - b. Were the patients who served as subjects terminally ill?

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- ✓ 3. Category 1.003, Number 106 describes an experiment in which microspheres containing radioactive material were fed to 57 individuals.
 - a. Why was this sample size so large, compared to other experiments which used smaller numbers of patients?
 - b. From what sources were human subjects obtained?
4. Category 2.001, Number 2 and Category 2.002, Number 189 describe the testicular irradiation of prisoners.
 - a. 67 prisoners in Oregon and 64 prisoners in Washington were irradiated. Why were these sample sizes so large, compared to other experiments which used smaller numbers of patients?
 - b. Was the possibility of early parole raised for prisoners who volunteered as subjects?
 - c. Provide the Subcommittee with the Department's understanding of what other information on the experiment and its design was given to prisoners. Provide all relevant documentation on the information given to prisoners.
5. Category 3.001, Number 49 reports that two patients with arthritis were treated with x-ray exposure. Has this treatment ever been found effective in alleviating or curing arthritis?
6. Category 4.006, Number 93 describes experiments in which humans were subjected to neutron and ion beams.
 - a. Were the human subjects placed within neutron and ion beams?
 - b. What doses did the subjects receive?
 - c. Was there any medical follow up on the human subjects?
7. Category 9.001, Numbers 139, 149, 152, 153, 154, 155, 156, 157, 161 cover experiments at an institution in Puerto Rico.
 - a. Describe the nature of the Center for Energy and Environmental Research, Puerto Rico. Does the Center still exist?
 - b. Approximately what proportion of the Center's total expenses did the AEC provide? Did any other U.S. federal agency provide support for the Center at the time of the experiments? Does any U.S. federal agency provide support for the Center today?

- c. Follow up data is described as "not available now." Does this mean that the data was once available, or will be available in the future?
 - d. For Numbers 149, 156, and 161, attachments are listed but were not attached. Please provide these documents.
 - e. For each set of experiments described, would these experiments have been allowed in the United States at the same time as they were conducted in Puerto Rico? Would they be allowed today? Provide all documentation relevant to this question, including but not limited to an explanation of the regulations of Puerto Rico on human experimentation at the time of the experiments and an analysis of the difference between Puerto Rican and U.S. regulations at the time.
 - f. Has the Department of Energy or any predecessor agency ever sponsored, funded or administered any research or experiments to study the effects of radiation exposure, planned or accidental, when these experiments knowingly or unknowingly would not have been permitted in the U.S.?
 - g. Has the Department of Energy, or any predecessor agency, ever sponsored research to study the effects of radiation exposure, either accidental or planned, on any forest area in Puerto Rico? Provide all documentation on the objectives, methods and results of such research.
8. Category 9.001, Number 166 describes an experiment in which uranium was injected into terminal brain tumor patients.
- a. How were subjects selected for this experiment?
 - b. Since most of the subjects were comatose, how was consent provided? Did patients sign any consent forms? For what reasons did patients agree to participate?
 - c. Has neutron capture therapy with U-235 ever been proven as an effective treatment for brain tumor patients?
9. Category 9.002, Numbers 142, 143, 158, 159, and 160 were also conducted in Puerto Rico.
- a. Please answer questions 7c and 7e for these experiments as well.
 - b. Attachments are listed but not included for Numbers 142, 143, and 158. Please provide these documents.

Honorable John Herrington
March 7, 1986
Page 4

10. Category 11.001, Number 53 briefly describes experiments on the biological effects of thorium X on human skin.
 - a. For what reason were these experiments conducted?
 - b. How many subjects were involved in these experiments?
 - c. What doses did subjects receive?
 - d. Provide any documentation describing the experiment in more detail.
11. Category 11.001, Number 112 lists as an attachment a memo of 6-22-84 from Roy C. Thompson to Sidney Marks, but this is not included. Please provide a copy of this memo.
12. Category 11.001, Number 134 briefly describes an experiment in which fission products were deposited on subjects' hands.
 - a. How many subjects were involved in these experiments?
 - b. What doses did subjects receive?
 - c. NP-4935 is listed as a reference. Please provide this document, and all other documents describing the experiment.
- ✓ 13. Category 11.001, Number 137 describes an experiment in which aircrews were instrumented with dosimeters while delivering a live rocket.
 - a. How many subjects were involved in these experiments?
 - b. What doses did subjects receive?
 - c. ITR-1418 is listed as a reference. Please provide this document, and all other documents describing the experiment. *Koewicher, Bantes*
14. Category 11.001, Numbers 138, 141, 146, and 151 were also conducted in Puerto Rico.
 - a. Please answer questions 7c and 7e for these experiments as well.
 - b. References are listed as attached for Number 138, but are not included. Please provide copies of these references.
 - c. Please provide all documentation which describes these experiments more fully.

1003392

Honorable John Herrington
March 7, 1986
Page 5

- ✓ 15. Category 12.001, Number 97 includes a proposal to use human subjects to study the metabolism of food material labeled with Zn-65.
- a. Were any human subjects fed Zn-65? If so, how many?
 - b. What doses did subjects receive?
 - c. Please provide all documentation which describes these experiments more fully.

If there are any questions concerning this request, please contact John Abbotts with the Subcommittee staff at (202) 226-2424. I appreciate the Department's past cooperation on this matter, and I would appreciate receiving a response to these questions by March 28, 1986.

Sincerely,



Edward J. Markey
Chairman

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1003393