



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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AUG 8 1979

Mr. Lawrence W. Skinner
373 Ellis Street, #501
San Francisco, CA 94102

IN RESPONSE REFER
TO FOIA-79-250

Dear Mr. Skinner:

This is in response to your letter dated July 2, 1979 in which you requested, pursuant to the Freedom of Information Act, information related to nuclear energy/engineering.

In response to your request, the documents listed in the appendix are enclosed.

In a July 24, 1979 telephone conversation with Mr. Stephen Isaacs of my staff, you were informed that this office would respond to as many of your questions as possible and that you could write directly to the Department of Energy (DOE) for the additional information.

The following information corresponds to the numbered items of your letter:

3. The equations for calculating curies per gram (specific activity) were taken from page 103 of the Radiological Health Handbook, January 1970. To calculate total curies, one simply multiplies curies/gram by number of grams, the reciprocal of curies/gram is multiplied by the total curies. (Enclosure 1)
5. GESMO (NUREG-0002, Vol. 2, pages II-9 through 11, and 3, pages IV J-1 through IV J(E)-18), available from NTIS, discusses the radiological hazards of plutonium. (Enclosures 2 and 3 provide this information.)
8. The GESMO report (NUREG-0002, Vol. 4, pages VIII-27 through 29) provides NRC's most current information on the value of plutonium. This is provided as Enclosure 4. Additional information is also provided in Nuclear Technology, Vol. 18, May 1973, pages 80-86, a copy of which is included as Enclosure 5.
9. There are no commercial reprocessing facilities (separation plants) in operation in the United States. The DOE is operating Government facilities at Idaho Falls and Savannah River.

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10. A discussion of the chemical process for the separation of plutonium is discussed in GESMO (NUREG-0002, Volume 3, pages IV E-1 through E-49) and is available from NTIS. (Enclosure 6 provides this information.)

The following reports are available through the National Technical Information Service (NTIS), Springfield, Virginia 22161.

- a. ORNL-4436, AQUEOUS PROCESSING OF LMFBR FUELS - TECHNICAL ASSESSMENT AND EXPERIMENTAL PROGRAM DEFINITION - Oak Ridge National Laboratory, June 1970
- b. NUREG-0020 (various volumes) - OPERATING UNITS STATUS REPORT - LICENSED OPERATING REACTORS DATA FOR DECISIONS - Department of Energy/NRC (NTIS)
- c. DOE-ET-0054 - ANALYTICAL METHODOLOGY AND FACILITY DESCRIPTION SPENT FUEL POLICY - U.S. Department of Energy, August 1978
- d. GA-A14140 - UC-70 - HTGR SPENT FUEL ELEMENT DECAY HEAT AND SOURCE TERM ANALYSIS - Sund, Strong and Engholm - Prepared by General Atomic for San Francisco Operations Office, U.S. Energy Research and Development Administration February 1977
- e. NUREG-0002 - All Volumes - GESMO

The following should be requested through the agency indicated:

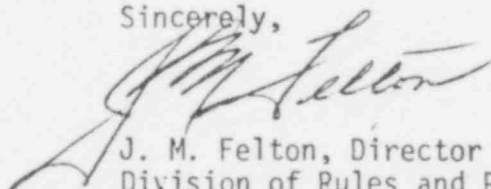
- a. DP-1467 - EXPERIENCE WITH PROCESSING IRRADIATED FUEL AT THE SAVANNAH RIVER PLANT (1954-1976) - E. B. Sheldon, September 1977 - DOE
- b. BMI-EQAC-1, COPROCESSING - AN EVALUATION OF CHEMICAL REPROCESSING WITHOUT SEPARATION - to the Council on Environmental Quality and the Arms Control and Disarmament Agency - Battelle Columbus Laboratories, October 28, 1977 - ACDA

The following publication is available through UNIPUB. P.O. Box 433, Murray Hill Station, New York, N.Y. 10016:

IAEA - POWER REACTORS IN MEMBER STATES - 1978 Edition - International Atomic Energy Agency, Vienna, Austria.

This completes action on your request.

Sincerely,



J. M. Felton, Director
Division of Rules and Records
Office of Administration

Enclosures: As stated

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APPENDIX

1. Radiological Health Handbook, January 1970, page 103, Activity Mass Relationship-Specific Activity
2. GESMO (NUREG-0002), Vol. 2 pages II-9 through 11.
3. GESMO (NUREG-0002), Vol. 3, pages IV J-2 through IV J(E)-18
4. GESMO (NUREG-0002), Vol. 4, pages VIII-27 through 29)
5. GESMO (NUREG-0002), Vol. 18, May 1973, pages 80-86
6. GESMO (NUREG-0002) Vol. 3, pages IV E-1 through E-49

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