

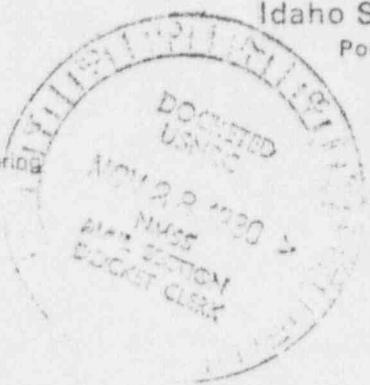
ODR

70-1374



Idaho State University
Pocatello, Idaho
83209

School of Engineering
Box 8060
(208) 236-2281



November 19, 1980

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Nuclear Regulatory Commission
Uranium Process Licensing Section
Uranium Fuel Licensing Branch
Division of Fuel Cycle and Material Safety
Washington, D. C. 20555

Attention: Mr. Robert L. Stevenson

Gentlemen:

In reference to your letter dated October 7, 1980 regarding the renewal of our Special Nuclear Material License SNM-1373, our reply is enclosed.

A biographical data sheet for Terry W. Smith, the new prospective Reactor Supervisor replacing Gerald F. Ramsey, is also included.

Sincerely yours,

Terry W. Smith
Reactor Supervisor

TWS:bgs

- Enclosure (1) Reply to Questions
(2) Biographical Data Sheet



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Reply to Questions on Renewal Application
Idaho State University
June 23, 1978, Docket 70-1374

1. What are the required qualifications of the Reactor Supervisor?

Either a Bachelor of Science in an Engineering or technical discipline and six years experience as a reactor operator or a Master of Science in an Engineering or technical discipline and two years experience as a reactor operator.

2. Who is responsible for maintenance of the personnel radiation exposure records?

Idaho State University's Radiation Safety Officer, presently Mr. Terry W. Smith, who is also the Reactor Supervisor. He is responsible for exposure records for the entire campus. He is assisted by Mr. Jim French, University Health Physicist.

3. Who is responsible for ensuring that persons exposed to radiation wear the required monitoring devices?

The Radiation Safety Officer is ultimately responsible. The responsibility is delegated to the staff laboratory supervisors or to responsible students who have become thoroughly familiar with the radiation hazards associated with the facility.

4. Please describe the provisions for and required frequency of calibration of the radiation detection instruments.

The radiation detection instruments are given a calibration check every six months. The calibration check is performed with a 1.0 Ci ^{137}Cs source, 3M4F6S, S.N. 2481 in a J. L. Shephard and Associates Model 28-6A Calibrator, S.N. 587. The count rate meters are response checked with a pulse generator. The proportional counters with scalers are checked with known sources before use or daily when in use.

5. We note that the renewal application does not include the neutron sources authorized by your present license. How is the subcritical assembly used without a substantial neutron source?

If neutron sources containing plutonium are to be used, the sources and provisions for their periodic leak testing should be described.

The five Pu-Be neutron sources noted in our License No. SNM-1371 were never received from Rutgers University. We received two Pu-Be neutron sources in 1962 from Monsanto Research Corporation, Mound Laboratory, under an AEC loan later to become a grant.

5. Continued.

The mixture of Plutonium and Beryllium is contained in tantalum and stainless steel cylindrical containers.

Inside dimensions of each container: .82" ID x .75" H

Outside dimensions of each container: 1.02" OD x 1.45" H with 10-32 tapped hole.

Plutonium content:	Source S.N. M-1197	18.04g Pu, 7.86g Be
	Source S.N. M-1198	1.80g Pu, 7.86g Be

Neutron emission:	Source S.N. M-1197	2.10×10^6 n/sec
	Source S.N. M-1198	2.8×10^5 n/sec

The sources are leak tested every six months by the Radiation Safety Officer.

6. The Reactor Safety Committee has reviewed and approved all plans for the storage and use of the licensed material: (a) Please describe the required membership and qualifications of the Reactor Safety Committee and (b) Please confirm that the Reactor Safety Committee must approve changes to the procedures or the equipment.

Reactor Safety Committee members: Frank Just, Chairman, DeWitt T. Neill, Joseph Price, Ken Faler, Michael Vaughn, Don Waddoups, Terry W. Smith (Ex-officio), and Albert E. Wilson (Ex-officio).

Frank Just, Chairman

Education: M.S. in Electrical Engineering

Present Position: Lead Engineer, Data Acquisition and Process Control Systems, Argonne National Laboratory

Previous Experience: Facility Engineer, Shield Test Pool (Facility, General Electric); Reactor Operator, Shield Test Pool (Facility, General Electric); Instrumentation and Control Engineer, including Reactor Instrumentation (Facility, MTR and ETR, Idaho National Engineering Laboratory).

6. Continued.

DeWitt T. Neill

Education: M.S. in Chemical Engineering, 1957, University of Oklahoma.
Ph.D. in Chemical Engineering, 1968, University of Oklahoma.
Present Position: Professor of Engineering at Idaho State University
since 1968.
Previous Experience: Project Engineer at Materials & Engineering Test
Reactors, National Reactor Testing Station, Idaho, 1957-1965.
Assistant and Associate Professor of Engineering at Idaho State
University.

Ken Faler

Education: Ph.D. in Nuclear Chemistry, University of California Berkeley.
Present Position: Professor of Chemistry at Idaho State University
Previous Experience: Research in reactor-related chemistry and physics,
Idaho National Engineering Laboratory, 1959-1969. Nuclear Chemistry
Research Group Supervisor, 1969, INEL. Relevant projects included
fission yields at resonance energies, waste disposal, neutron acti-
vation, nuclear structure studies, separation processes, double
neutron capture, etc.

Michael E. Vaughn

Education: M.S. in Physics, 1969, Idaho State University
Present Position: Nuclear Hot Cell Operations, Argonne National
Laboratory, Idaho Falls, Idaho.
Previous Positions: Nuclear Fuel Testing, Idaho Nuclear Corporation,
Idaho Falls; Nuclear Power Plant Operations on a PW Reactor for
General Electric and Westinghouse, Idaho Falls, Idaho.

Don Waddoups

Education: B.S. in Electrical Engineering.
Present Position: Project Engineer for Consumer Power Company's Palisade's
Plant PCS over protection system.
Previous Experience: Instrumentation and Control Design, procurement and
installation for Radioactive Waste Volume Reduction Pilot Plant;
Eight years experience in operation of nuclear test reactors.
Certified as shift supervisor for both ETR and ATR at Idaho National
Engineering Laboratory; Test Engineer for nuclear plant containment
program.

Reply to Questions on Renewal Application
Idaho State University
June 23, 1978, Docket 70-1374
Page 4

6. Continued.

Joseph Price

Education: Ph.D. in Physics

Present Position: Chairman, Department of Physics, Idaho State University

The Reactor Safety Committee must and does approve changes to the procedures and equipment.

Smith, Terry Wray
Reactor Supervisor/Radiation Safety Officer
Idaho State University

SS#519-52-1681

Education:

1967-68 Naval Nuclear Weapons School, Albuquerque, New Mexico
1969-73 B.S. in Chemical Engineering, University of Utah, SLC
1973-74 Naval Nuclear Power School Bainbridge, Maryland
Naval Nuclear Power Prototype SIC, Windsor Locks, Connecticut

Experience:

1963-69 Nuclear Weapons Technician, Lake Mead Base, Las Vegas, Nevada
1974-76 Engineering Duty Officer, USS Halibut, SSN 587, SSN
Nuclear Powered Submarine
1976-79 Engineering Officer of the Watch, USS Ethan Allen,
SSBN608G, SSN Nuclear Powered Submarine
1979-80 Senior Operations Engineer, LOFT Facility, EG&G, Inc.,
Idaho National Engineering Laboratory
Present Radiation Safety Officer/Reactor Supervisor, Idaho State
University, Pocatello, Idaho