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SCHLUMBERGER-DOLL RESEARCH OLD QUARRY ROAD - P.O. BOX 307 RIDGEFIELD, CONN 06877 203-431-5000

83 JUL 27 AM 1:32

July 25, 1983

U.S. Nuclear Regulatory Commission  
Materials Licensing Branch  
Division of Fuel Cycle and Material Safety  
Washington, DC 20555

RECEIVED BY IFMB	
Date	7/9/83
Log	July - 476-10
Orig To	
Action Comp	8/3/83

Gentlemen:

Subject: Renewal of Special Nuclear Materials License  
No. SNM-239

This letter is a request to renew our Special Nuclear Materials License No. SNM-239 which expires on August 31, 1983.

1. Review of Current License

The radionuclide (Plutonium) quantity possessed, and uses accurately represents the current and anticipated programs.

2. Review of Submitted Documents

September 29, 1977	Application	current
June 15, 1978	letter	current
July 31, 1978	letter	current

Enclosed is revised information concerning the current composition of the Radiation Protection Committee, the current users with experience information for any new user, and an up-to-date list of radiation protection instrumentation.

3. The radiation safety program appears to address the provisions of the current NRC regulations.

4411200372 13pp. x1A 3-1-96

SEARCHED	INDEXED
SERIALIZED	FILED
JUL 29 1983	
FBI - NEW YORK	

no refusal due added to 66-00807-01 after review

Region - 2 - 8/9/83 - 2700

SCHLUMBERGER TECHNOLOGY CORPORATION COPY

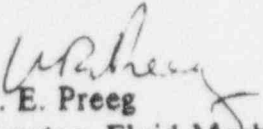
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If there are questions concerning this application please contact:

Dr. Paul Albats  
Schlumberger-Doll Research Center  
P.O. Box 307  
Ridgefield, CT 06877  
Phone: (203) 431-5000

A check for the renewal fee of \$460.00, under 10CFR Part 170.31,1J is enclosed.

Very truly yours,

  
W. E. Preeg  
Director, Fluid Mechanics-Nuclear Department  
Chairman, Radiation Protection Committee

Enclosures (4)

I p 1 - Radiation Protection Commi e

(July, 1983)

W. E. Preeg	Chairman
P. Albats	Radiation Protection Officer
S. L. Borst	
R. Hoffmaster	
J. Schweitzer	

Radiation experience resumes for Albats and Hoffmaster are included; resumes for the other members have been submitted previously.

Item 2 - List of Users

P. Albats	(new)
S. Antkiw	
A. Becker	
J. Boyce	(new) ✓
F. Chen	(new) ✓
G. Corris	(new) ✓
W. Diamond	
J. Doucet	(new) ✓
G. King	(new) ✓
D. LePoiré	(new) ✓
A. Liberman	
W. A. Loomis	(new) ✓
R. Manente	(new) ✓
C. Melcher	(new) ✓
W. Nelligan	
J. Schweitzer	

Radiation experience resumes are included for the new users; resumes for the other users have been submitted previously.

Paul Albata

Education:

1964 B.S. University of Chicago  
1971 Ph.D. Cornell University, exp. physics

Experience:

1969-78 Research Associate/Sr. Research Associate/  
Assistant Professor

Case Western Reserve University

Research in gamma-ray astronomy and solar  
and atmospheric neutron measurements;  
designed and developed detection systems,  
instrumentation, data analysis programs;  
participated in five expeditions to  
Australia, one to Argentina, four at NSEP  
in Texas to conduct scientific balloon  
flight observations.

1978- Professional Staff at SDR

Research on Minitron and neutron logging  
experiments on neutron detection for  
different energy regions.

Training in radiation safety at SDR-formal  
course and 5 years on the job.

Ronald G. Hoffmaster

Education:

June, 1974    M.S., Public Administration  
                 Drexel University  
                 Philadelphia, PA

April, 1971    B.A., Government  
                 Dartmouth College  
                 Hanover, NH

Employment History:

October 1980 to Present  
Schlumberger, Ltd

Personnel Manager, Schlumberger-Doll Research Center (October, 1982 to present)  
Direct overall employee relations function at corporate research facility of 250. Emphasis includes staffing and manpower planning, communications, compensation, appraisal, employee development, benefits, and EEO. Coordinated international transfers and immigration process, served on Radiation Protection Committee, and assisted in general managerial and public relations functions.

Personnel Director, Vector Cable Company (September, 1981 to October, 1982)  
Full range employee and labor relations functions in cable manufacturing plant of 450.

Personnel Administrator, Schlumberger Offshore Services (October, 1980 to September, 1981)  
Responsible for compensation, benefits, appraisal, discipline, EEO, training, and administrative coordination in offshore well logging unit consisting of approximately 900 employees and 12 locations.

March, 1975 to July, 1977

Personnel Director, City of East Providence, East Providence, RI

Responsible for recruitment and selection, position classification and compensation, labor relations, E.E.O. compliance, benefits administration, training, and management development.

September, 1971 to February, 1975

City of Philadelphia, Philadelphia, PA

Assistant Personnel Officer, Philadelphia Fire Department (June, 1973 to February, 1975)

Responsible for interviewing, appointments, staffing, record-keeping, discipline and absenteeism control, contract administration, coordination with central agencies in position classification, compensation, recruitment, and selection. Supervised eight subordinates.

Personnel Technician, Philadelphia Personnel Department (September, 1971 to June, 1973)

Responsible for development and administration of selection instruments, including scored interviews, written and performance examinations and assessments of training and experience. Conducted job analyses and field audits; coordinated with classification and recruitment agencies and operating departments.

References:

Furnished upon request.



**JAMES R. BOYCE**

Radiation Experience

As of July, 1983

Research Assistant, Duke University and Triangle Universities Nuclear Laboratory, 1968-1972. Assembled, operated, and conducted research with the TUNL Cyclo-Graeff - a cyclotron injected tandem Van de Graeff accelerator - which used beams of proton, deuterons, helium-3, helium-4, lithium isotopes, as well as some other light element ions. Ph.D. thesis on measuring the fission cross section of all uranium isotopes by proton bombardment. Proton energies used from 4 MeV to 32 MeV. Safety Committee member.

Research Associate, Duke University and Triangle Universities Nuclear Laboratory, 1972-1974. Conducted research with Cyclo-Graeff in fission and neutron cross-section measurements.

Research Associate, Cornell University, Ithaca, NY, 1976-1978. Conducted research using the Cornell TRIGA reactor. Research involved obtaining and using a thermal neutron beam from the reactor.

Member of the Professional Staff, Schlumberger Doll Research, Ridgefield, CT, 1978-present. Conducting research using photon radiation produced by an electron beam linac. Principal author of Linac Laboratory Safety Manual. SDR Safety Officer, 1980-1981.

**FELIX CHEN**

- Ph.D., New York University (1973-1979): Graduate work involved using various accelerators (NYU, ORNL, BNL) to study the phenomena of charged particle penetration through matter, i.e., radiation damage, X-ray production, etc.
- 1979-present: Member of professional staff at SDR. Duties include devising tritium handling facilities, supervising loading of tritium into neutron generator, performing experiments using neutron generators and detectors.



**GARY W. CORREIS**

**EDUCATION:** M.S. Electrical Engineering - University of Bridgeport - 1978  
B.S. Electrical Engineering - Bridgeport Engineering Institute - 1975  
Basic Radiation Safety Course - General Physics Corp. at SDR - 1979

**EMPLOYMENT:** 1969-Present: Schlumberger Doll Research; Electronics Engineer  
Work with 14 MeV neutron generator, gamma & neutron logging sources,  
gamma calibration sources, linear accelerator.

**Joseph A. Doucet**

B.S. Physics, Georgetown University, 1965  
M.S. Education, Michigan State University, 1969

Radiological Defense Officer (RDO) course, 1977.

A two-week course given by the University of Lowell, Mass. on radiation basics, emergency planning, nuclear war games, etc.

SDR Basic Radiation Safety Course, 1979.

A three-day course given by General Physics Corporation on site for all radiation workers.

Linatron 200/400/2000 Course, 1979.

A one-week course on the operation and maintenance of Varian Linacs.

**Work Experience:**

12 years teaching basic physics, including nuclear physics using micro-Ci level sources.

1977-present, Nuclear Physics Department of SDR.

I have handled up to 16 Ci Pu-Be and Am-Be neutron sources, and up to 1.6 Ci Cs-137 sources. I have used Linac-type radiation sources in the capacity of senior operator.

## **Radiation Resume - George King**

July 25, 1983

### **Member of Professional Staff - George King**

#### **Education and Training**

B.A. Math-Physics	Talladega College	1968
M.S. Physics	Stanford University	1973
Ph.D Physics	Stanford University	1977

#### **Experience**

1979 - present Schlumberger Doll Research

Research supporting photon well logging systems. Used 4 MeV electron linear accelerator and 1.5 Ci Cs137.

1977 - 1979 Lawrence Berkeley Laboratory

Participated in research using relativistic heavy ions to investigate new phenomena in nuclear matter.

1971 - 1977 Stanford University

Directed the investigation of polarized proton capture by tritium, used a 3 Ci tritium target and Tandem Van de Graaff accelerator in this work. Member of Radiation Safety Committee.

### **Dave LePaire**

B.S. Physics, California Institute of Technology 2/81-6/82.

Research in Sputtering of Frozen Volatiles with a Tandem Accelerator. The energy of the ions ranged from 1 MeV to 25 MeV.

**William A. Loomis**

- 1966            Research Assistant, Radiation Dosimetry Branch  
                 Atomic Energy of Canada, Chalk River Ontario
- 1973            Ph.D. - Experimental Particle Physics, Cornell University
- 1972-1981      Post-Doctorate and Assistant Professor, Harvard University
- 1981-present   Member of Professional Staff and Program Leader - SDR

Extensive experience with use of external particle beams at Brookhaven and Fermi National Labs, in period 1967-81.

**RALPH MANENTE**

**Radiation Experience**

Ralph Manente graduated in 1965 from the Hartford State Technical Institute with an associate degree in electronics. He has been employed from 1956 to the present in the Nuclear Department at Schlumberger-Doll Research working on projects using radioactive sources and neutron generator tubes.

**Radiation Experience Resume - July 25, 1983**

**Charles Melcher**

Ph. D. in physics from Washington University, St. Louis: 1980

1974-1980: worked with ~1 Ci Sr-90 beta sources and ~50 mCi Am-241 alpha sources completed course on radiation safety and passed exam.

1980-1983: California Institute of Technology - worked with Van de Graaf accelerators and small alpha sources (~100 mCi).

1983: Schlumberger-Doll Research - using small (<100 mCi) gamma emitters to investigate new radiation detector materials.

## ITEM 10 RADIATION DETECTION INSTRUMENTS

### Beta-Gamma Survey Meters - Geiger counter

Victoreen Model 491; 0-0.1/0.3/1/3/10/30/100 mr/hr  
Nuclear Chicago Model 2612 0-0.2/2/20 mr/hr  
Eberline Inst. Co. Model E-120 0-0.5/5/50 mr/hr  
Victoreen Model 470A 0-3/10/30/100/300/1000/10,000 mr/hr

### Gamma Survey Meters - Ion Chamber

Technical Assoc. Model CP-5 0-2.5/25/250 mr/hr; 0-2.5/25/250 R/hr  
Victoreen Model 740 F 0-25/250/2500/25,000 mr/hr  
(2) Victoreen Model 440 RFC 0-1/3/10/30/100 mr/hr

### Neutron Survey Meters

Nuclear Chicago Model 2112; 0-150/1500/15,000 cpm  
(1.7 cpm equals 1 n/sq.cm/sec @ 14 MEV)  
(2) Nuclear Research Corp.  
Model NP 2 (SNOOPY) 0-2/20/200/2000 mrem/hr

### Fixed Room Monitors

(3) Victoreen Model 845 Ion Chamber X-ray/gamma monitors  
0.1 mr/hr-10,000 R/hr  
(2) Technical Assoc. Model 5A/5AN gamma/neutron monitors  
0.01-10,000 mr/hr; 0.01-10,000 mrem/hr  
(2) Technical Assoc. Model FIL 5D Ion Chamber X-ray/gamma monitors  
0.1-10,000 mr/hr  
Victoreen Model VAMP-3 Ion Chamber gamma monitor  
0.1-100 mr/hr  
Nuclear Research Corp. Model TN-61-3 neutron monitor  
0.1-10,000 mrem/hr

### Air Monitors

Triton Model 955B Tritium monitor 0-10/100/1000/10,000 uCi/cu. meter  
Johnston Labs Inc. Model 133CT Tritium monitor  
10-100,000 uCi/cu. meter