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 AUTH. NAME: AUTHOR AFFILIATION
 BOUCHEY, G.D. Washington Public Power Supply System
 RECIPIENT NAME: RECIPIENT AFFILIATION
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Forwards info re ed & qualifications of health physics
 supervisor & technicians in response to Pages 16 & 17 of
 Section 12.5.1. of draft SER. Open items considered complete.

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Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

January 11, 1982
G02-82-25
SS-L-02-CDT-82-007

Docket No. 50-397

Mr. A. Schwencer, Director
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington D.C. 20555



Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2
EDUCATION AND QUALIFICATIONS OF
HEALTH PHYSICS SUPERVISOR AND TECHNICIANS

In response to open items on pages 16 and 17 of section 12.5.1 of the draft SER for WNP-2, enclosed are sixty (60) copies of the subject information. This information should close out these open items.

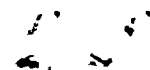
Very truly yours,

G. D. Bouchey
Deputy Director, Safety and Security

CDT/ct
Enclosures

cc: R. Auluck - NRC
WS Chin - BPA
R. Feil - NRC-Site

1 B001
51/1



EDUCATION OF HEALTH PHYSICS SUPERVISOR

NRC Position:

Based on information transmitted to the staff via a phone call with the applicant, the Health Physics/Chemistry Manager at WNP-2 meets the qualification criteria of Regulatory Guide 1.8 for Radiation Protection Manager. The draft ANS 3.1 recommends that individuals temporarily filling the RPM position should have a B.S. degree in science or engineering, and 2 years experience in radiation protection, 1 year of which should be nuclear plant experience, 6 months of which should be onsite. The Health Physics Supervisor, who will serve as the backup to the RPM in his absence, satisfies these requirements, according to information transmitted by a phone conversation with the applicant. The staff must formally receive this information in writing from the applicant before we can resolve the issue of qualifications. This is an open issue.

Response:

The Health Physics Supervisor is the designated individual responsible for RPM duties in the absence of the Health Physics/Chemistry Manager. This individual meets or exceeds the qualification recommendations of draft ANS 3.1.

A resume of the incumbent, Attachment 1, describes more than 12 years of directly applicable experience including 83 weeks of related technical training. Plant Manager approval of experience and technical training in lieu of a bachelor's degree will be maintained in the incumbent's training and qualification file.

In addition, the Health Physics/Chemistry Manager and temporary replacement have access to, and the support of, several in-company health physics professionals with RPM level qualifications. Examples of supporting and alternate replacement personnel qualifications are described in current resumes, Attachments 2, 3, and 4.

Title: Health Physics/Chemistry Supervisor
Name: Robert G. Graybeal
Education: 1951 B.S. Education Kearney State Teachers College
 1960 Business Administration Columbia Basin College
 1962 Business Administration University of Washington
Training: 1956 3 months Fundamentals of Radiation Measurement
 General Electric, Hanford
 1963 1 week First Line Supervision
 General Electric, Hanford
 1965 2 weeks Radionuclide Analysis by Gamma
 Spectroscopy, USPHS
 1965 2 weeks Measurement of Airbone Radioactivity, USPHS
 1965 1 week Management of Radiation Accidents, USPHS
 1968 2 weeks Medical X-Ray Protection, USPHS
 1972 3 months BWR Chemistry, GE - VNC
 1973 3 months BWR Radiological Engineering, GE - VNC
 1978 5 weeks WNP-2 BWR Systems Analysis Course
Experience: 1978-Present Washington Public Power Supply System
 Health Physics/Chemistry Supervisor for WNP-2
 Coordinate and supervise health physics and chemistry activities
 associated with plant procedure manual preparation (Chemistry,
 Health Physics), design review and Plant Operating Committee re-
 views. Supervise training of Health Physics/Chemistry personnel,
 including classroom and field training.
 1977-1978 Washington Public Power Supply System
 Administrative Security Supervisor
 Responsible for supervising security activities related to pre-
 employment screens, investigations and badging. Coordinated
 preparation of the WNP-2 Security Plan and prepared the Supply
 System's Overt Threat Contingency Plan.

1975-1977 Washington Public Power Supply System
Senior Health Physicist

Responsible for initial preparation of the Supply System's Health Physics Program Manual. Reviewed the WNP-2 Radiological Environmental Program and prepared procedures for implementation. Performed ALARA design reviews. Scoped and coordinated activities required to initiate the Supply System's Radiation Exposure Record System.

1971-1975 Iowa Electric Light and Power Company
Radiation Protection Engineer

Responsible for establishing the Health Physics and Chemistry Programs for operation of the Duane Arnold Energy Center. Responsible for plant radiation safety, process chemistry, waste disposal and environmental monitoring programs.

1968-1971 University of Iowa State
Hygenic Laboratory

Responsible for establishing and implementing environmental and x-ray survey programs for the State of Iowa.

1964-1968 Dairyland Power Cooperative
Health and Safety Engineer

Responsible for establishing and implementing health physics, chemistry and industrial safety programs for the LaCrosse Boiling Water Reactor.

1962-1964 Hanford Atomic Products Operation, General Electric
Supervisor, Waste Disposal and Decontamination

Responsible for decontamination of building facilities and equipment, disposal of liquid and solid wastes and advising others as to specialized methods of decontamination and waste disposal.

1959-1962 Plutonium Recycle Test Reactor, General Electric
Reactor Technician

Controlled, monitored and analyzed startup, operation and shutdown of the Plutonium Recycle Test Reactor and related facilities to generate data for evaluation of the plutonium recycle concept. Assisted in the performance of equipment tests and other research and development activities. On special assignment to prepare the PRTR rupture, test loop instrumentation manual and assisted in writing and carrying out design tests associated with the test loop.

1954-1959

Hanford Atomic Products Operation, General Electric
Radiation Monitor

Provided contamination and radiation control services in nuclear
fuel chemical separation facilities and production reactors.

1953-1954

Hanford Atomic Products Operation, General Electric
Laboratory Technician

Participated in the performance of soil studies related to radio-
active waste disposal.

Title: Health Physics Supervisor

Name: Larry G. Berry

Education: 1975 - Non-degree study, Chabot College
1978 - Nuclear Technology Courses

Training: 1970 6 months Nuclear Power Fundamentals and Theory
Navy, Vallejo, California

1971 6 months Nuclear Power Systems and Simulator
Navy, Idaho Falls, Idaho

1971 3 months Engineering Laboratory Technician Training
Navy, Idaho Falls, Idaho

1978 100 hours Health Physics Technician Training
General Electric, VNC

1979 200 hours Health and Safety Technician Training
Lawrence Livermore Laboratory, California

1980 100 hours Health Physics/Chemistry Technician
Washington Public Power Supply System

1980 4 weeks Health Physics Outage Training
Duane Arnold Energy Center

1980 6 weeks GE BWR Chemistry for Technicians
Washington Public Power Supply System

1981 8 weeks BWR Radiological Engineering
General Electric, VNC

Experience: 1980 - Present Washington Public Power Supply System
Health Physics Supervisor, WNP-2

Assist in the development and supervise the implementation of the Health Physics Program at WNP-2. Plan, coordinate and maintain the plant radiation surveillance program. Supervise and provide training for Health Physics/Chemistry technicians.

1979 - 1980 Washington Public Power Supply System
Health Physics/Chemistry Technician

Responsible for the performance of the plant radiation surveillance and chemistry programs.

1978 - 1979 Lawrence Livermore Laboratory
Health and Safety Technician

Responsible for auditing and surveying research and development laboratory for radiation, industrial, laser, fire and chemical hazards.

Larry G. Berry

Experience: 1975 - 1978
(cont'd)

GE Vallecitos Nuclear Research Center
Radiation Monitor "A"

Responsible for the performance of the site radiation surveillance program. Assisted in the performance of the site environmental surveillance program.

1969 - 1975

U.S. Navy Nuclear Power Program
Engineering Laboratory Technician

Performed radiation, contamination and airborne activity surveys during operation and shutdown of Naval nuclear power plants
Performed primary system radiochemistry and secondary system chemistry during operation and shutdown of Naval nuclear power plants.

AH- 2

OBJECTIVES

Active participation in the growth of commercial nuclear power through the position of Radiation Protection Manager at an operating nuclear power plant.

SUMMARY

Mr. Oldfield's training and experience exceed the requirements of USNRC Regulatory Guide 1.8, Personnel Selection and Training, for the position of Radiation Protection Manager. Listed below are the specific training and experience requirements of Regulatory Guide 1.8, and an indication of Mr. Oldfield's qualifications which satisfy the requirements.

The Radiation Protection Manager (RPM) should be an experienced professional in applied radiation protection at nuclear facilities dealing with radiation protection problems and programs similar to those at nuclear power stations. Mr. Oldfield has had more than fifteen years of applied radiation protection experience dealing with radiation protection problems and programs similar to those at nuclear power stations. Three and one half years of that experience was at either an operating nuclear power station or associated with nuclear power stations under construction. Comprehensive certification in Health Physics by the American Board of Health Physics is further indication that he is an experienced professional in applied radiation protection.

The RPM should be familiar with the design features and operations of nuclear power stations that affect the potential for exposures of persons to radiation. Mr. Oldfield chaired several radiation incident investigation committees and participated technically in the investigation of radiation exposure incidents during the time he worked at the Hanford N Reactor. In addition, he provided on-shift radiation protection technical expertise during two major refueling/maintenance outages. This work involved performing radiological evaluations and calculations to support maintenance procedure development and RWP preparation, as well as providing on-the-job radiation protection consultations.

The RPM should have the technical competence to establish radiation protection programs and the supervisory capability to direct the work of professionals, technicians, and journeymen required to implement the radiation protection programs. At the request of WNP-3/5 Operations, Mr. Oldfield wrote the WNP-3/5 FSAR Subsection 12.5 which describes the WNP-3/5 Health Physics Program. While at the University of Kansas, he developed and directed the University's Health Physics Program. This program provided radiation protection coverage for the broad scope radioactive materials and reactor licenses, which included a 250 kW training/research reactor, two accelerators, numerous X-ray machines and more than 75 radioactive materials projects involving approximately 200 individual radiation users. He has had approximately four years experience as a supervisor and ten years as a manager, directing the work of

SUMMARY (Continued)

both health physics professionals and technicians. (Two years as Supervisor, Field Inspection and Survey Unit, Radiological Health Section, Kansas Department of Health and Environment; two years as Assistant University Health Physicist, University of Kansas and ten years managerial experience as University Health Physicist, University of Kansas.)

The RPM should have a bachelor's degree or the equivalent in a science or engineering subject, including some formal training in radiation protection. Mr. Oldfield has a bachelor's degree in physics and a master's degree in radiological health. He has had 27 semester hours credit in radiation protection courses as well as approximately 275 contact hours of documented noncredit radiation protection training. He taught radiation protection courses for 12 years at the University of Kansas as part of the AEC (later ERDA and DOE) sponsored graduate health physics fellowship program.

The RPM should have at least five years of professional experience in applied radiation protection. (A master's degree may be considered equivalent to one year of professional experience and a doctor's degree may be considered equivalent to two years of professional experience where course work related to radiation protection is involved.) At least three years of this professional experience should be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations, preferably in an actual nuclear power station. ANSI/ANS-3.1-1978 states that, "Experience in design and construction may be considered applicable nuclear power plant experience and should be evaluated on a case-by-case basis." and "Experience acquired in nonpower plants such as test, training, research or production reactors, may qualify as nuclear power plant experience on a one-for-one basis, up to a maximum of one year." ANSI/ANS-3.1-1978 defines "nuclear power plant" as "Any plant using a nuclear reactor to produce electric power, process steam or space heating." Using the above definitions and methods of accounting for experience, Mr. Oldfield's professional experience is equivalent to: 18.5 years professional experience in applied radiation protection (210 months experience + masters degree, 12 months); 15.25 years experience in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in a nuclear power station (University of Kansas, 141 months; N Reactor, 15 months; WPPSS, 27 months); 4.5 years experience in an actual nuclear power station (N Reactor, 15 months; design, training and licensing related activities at WNP-2 and WNP-3/5, 27 months; and University of Kansas 250 kW training/research reactor, 12 months).

EDUCATION

University of Kansas, pre-doctoral courses in Radiation Biophysics (Health Physics), twenty-six semester hours or approximately one year full-time equivalent (1967-1972).

University of Michigan, MPH in Environmental Health/Radiological Health (1965-1966).

EDUCATION (Continued)

Emporia Kansas State University, BA with major in physics, minor in mathematics (1959-1963).

EXPERIENCE

Aug. 1979 -
Present

WASHINGTON PUBLIC POWER SUPPLY SYSTEM, RICHLAND, WASHINGTON

Health Physicist, Radiological Programs Department

As a member of the WPPSS central health physics organization, work has involved:

- o developing and coordinating task assignments for NUREG 0660, Section III, TMI action plan for WNP-3 and WNP-5 reactors,
- o performing ALARA design review status assessment for WNP-3 and WNP-5,
- o evaluating WNP-2 radiation and effluent monitoring systems with regard to the accident monitoring requirements of NUREG-0578, and providing specifications for required modifications,
- o performing aircraft hazards analyses for WNP-1/4 and WNP-2 FSARs,
- o providing technical support for development of an in-house TLD personnel monitoring program,
- o developing generic and plant specific health physics procedures,
- o providing technical support for WNP-2 plant health physics personnel,
- o developing training modules for plant health physics personnel,
- o auditing contractor and plant licensed activities,
- o performing licensing duties for WNP-2 by-product materials license,
- o developing shielding effectiveness evaluation program to verify adequacy of repairs to the WNP-2 sacrificial shield,

EXPERIENCE (Continued)

June 1978 -
Aug. 1979

- o Serving on Generation Training Council to aid in developing the WPPSS Shift Technical Advisor and Shift Supervisor training/upgrade program.

UNC NUCLEAR INDUSTRIES, OPERATIONS DIVISION, HANFORD PROJECT, RICHLAND, WASHINGTON

Senior Health Physicist, Radiological Engineering

Experience at Hanford's N Reactor included:

- o developing emergency preparedness and response plans,
- o providing technical bases and procedures for the internal and external personnel dosimetry programs,
- o providing technical direction and participating in radiation protection training programs,
- o investigating unusual occurrences and recommending corrective actions,
- o providing technical guidance and coordination for the fetal exposure reduction program,
- o making radiological safety analyses for projects to be conducted by other groups within the company,
- o maintaining the "Radiation Control Manual" in a current and effective status, and
- o providing technical guidance to the Radiation Control Specialist responsible for operating the external personnel dosimetry program.

Sept. 1966 -
May 1978

UNIVERSITY OF KANSAS, LAWRENCE, KANSAS

a) University Health Physicist (Radiation Safety Officer)

As Director of the Radiation Safety Service for a major research/teaching institution, responsibilities included:

- o supervising the work of health physics assistants and clerical staff,
- o developing radiation protection policies and procedures,

EXPERIENCE (Continued)

- o developing budgets for the radiation safety program,
- o preparing applications for the NRC reactor license and the University's Type A specific license of broad scope,
- o developing procedures for receipt, transfer and disposal of radiation sources, including development of a computerized radioisotope inventory system,
- o coordinating transportation of radioactive materials, obtaining required DOT special permits, and developing procedures to assure proper packaging, labeling and posting,
- o directing monitoring and environmental surveillance for a 250 KW training reactor,
- o evaluating the safety of reactor experiments and irradiations,
- o evaluating proposals for laboratory and field use of radioactive materials in research, including preparation of environmental impact statements, where necessary,
- o providing formal radiation protection training for persons desiring to use radiation in research,
- o directing operation and surveillance of a low-level radioactive burial ground,
- o developing an in-house TLD personnel monitoring system, and
- o training graduate students who provided health physics support services.

b) Instructor in Radiation Biophysics

As a member of the graduate faculty in the AEC/ERDA/DOE Health Physics and USPHS Radiological Health training programs, responsibilities included:

- o teaching graduate level courses in radiation protection and environmental radiation,
- o directing MS level research in health physics, and

EXPERIENCE (Continued)

Case Basis
During K.U.
Employment

- o teaching NSF/AEC summer institutes in radiation physics and radiation protection for high school and college biology teachers.

c) Consultant in Health Physics and Radiological Physics - Various Industrial and Medical Clients

Consulting services provided were licensing assistance, radiation safety appraisals, instrument calibration, radioanalytical services, sealed source leak tests, cobalt teletherapy and X-ray therapy calibrations, X-ray diagnostic unit calibrations and diagnostic X-ray radiation safety evaluations. Clients included a refinery, a fertilizer plant, an analytical laboratory, two oil well logging companies, a state health department, a nutritional research laboratory and fifteen hospitals and clinics.

May 1966 -
Aug. 1966

UNIVERSITY OF MICHIGAN/ARGONNE NATIONAL LABORATORY

Health Physics Trainee, Zero Gradient Synchrotron

This work at ANL was part of the U of M health physics training program. Provided major contributions to evaluation of commercially available "chirpers" for applications in high ambient noise levels, evaluation of the response of NTA dosimetry film to high energy (12.5 GeV) neutrons and protons and determination of the effectiveness of high density concrete and iron for shielding 12.5 GeV protons and associated radiations.

June 1963 -
Aug. 1965

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, TOPEKA, KS

Supervisor of Field Inspection and Survey Unit, Radiological Health Section

Work accomplished as a health physicist in this "Agreement State" radiation control program included:

- o supervising the work of inspection personnel,
- o writing regulations in preparation for assuming regulatory authority from the AEC,
- o directing compliance inspections of X-ray facilities and radioactive materials licenses,
- o providing on-the-job training for inspection personnel,

EXPERIENCE (Continued)

- o planning and providing emergency response,
- o safely recovering an unshielded 30 Ci Iridium-192 source dropped into a river by a radiographer,
- o providing radiological evaluation and directing decontamination of a well-logger's facility contaminated by a melted ^{226}Ra -Be source,
- o providing radiological evaluation for decontamination of ^{226}Ra aircraft dial stripping/repainting facilities, and,
- o providing radiological evaluation and directing decontamination of several medical facilities contaminated by leaking ^{226}Ra sources.

PROFESSIONAL AFFILIATIONS

Health Physics Society, (President of Mid-America Chapter, 1968 and 1977).
International Radiation Protection Association.

PUBLICATIONS

On the Shielding of the External Proton Tunnel Area of Argonne's Zero Gradient Synchrotron, ANL 7273, 1966.

CREDENTIALS

Certified in Health Physics by the American Board of Health Physics, 1969.
Licensed Private Pilot with Instrument Rating.

SUPPLEMENTARY EDUCATION

Various USAEC courses in health physics, dosimetry, licensing and regulation, 1963-1965.

Management Oversight and Risk Tree (MORT), 1979.

PERSONAL INFORMATION

Date of Birth: January 18, 1941

Physical: Height - 6 ft.; Weight - 195 lbs.
General Health - Excellent

EMPLOYMENT HISTORY

- 1980 - Present Washington Public Power Supply System
P.O. Box 968, Richland, Washington 99352
Position: Health Physicist 1.
- 1975 - 1980 Washington Public Power Supply System
Position: Health Physics Supervisor (WNP-2 Boiling Water Reactor).
- 1974 - 1975 Westinghouse Hanford Co.
Richland, Washington
Position: Operational Health Physics Analyst (Specialist II)
- 1967 - 1974 Argonne National Laboratory
Experimental Breeder Reactor II (EBR-II) site
Idaho Falls, Idaho 83401
Position: (1) Reactor Operator Trainee
(2) Senior Radiation Safety Technician (Reactor-rotating shift).
- 1966 - 1967 Argonne National Laboratory
Lamont, Illinois
Position: Radiation Safety Technician (R&D Laboratory).
- 1964 - 1966 Logan Long Co. (Building Materials Mfg. Co.)
6600 So. Central Ave.
Chicago, Illinois
Position: Quality Control Supervisor & Plant Chemist
(Bituminous Chemistry).
- 1962 - 1964 Bird & Son (Building Materials Mfg. Co.)
Chicago, Illinois
Position: Asst. Quality Control Supervisor & Plant Chemist.
- 1958 - 1962 Various employers during summer months and part-time to finance college education.
- 1954 - 1958 United States Navy (Radarman)

EDUCATION HISTORY

- 1978 General Electric "Radiological Engineering" Course. Sent by my company to this 8 week school. Certificate of completion and course outline included.
- 1976 General Electric BWR Systems Analysis Course (given at the plant site).

- 1976 Applied Health Physics Course at the "Joint Center for Graduate Study", Richland, Washington; 8 week duration, evening course.
- 1974 Nuclear Technology Course given by the "Eastern Idaho Vocational Technical School", Idaho Falls, Idaho. Associate Degree, course outline and grades included.
- 1967 - 1973 Applied Mathematics - University of Idaho through the Idaho Falls cooperative education program. Copy of my "Bachelor of Science" degree included.
- 1962 - 1967 Courses at various colleges in Illinois directed toward my goal of B.S. degree in mathematics.
- 1958 - 1962 Associate of Arts degree from "Wilson Junior College", Chicago, Illinois with emphasis on mathematics and physical science courses.

Amplified Resume

EMPLOYMENT HISTORY

- 4/80 - Present Employed by the "Washington Public Power Supply System" as the Plant (WNP-2) Health Physist. This position was created in April 1980 due to the increasing work load, sophisticating and updating emergency plans & implementing procedures, writing equipment - protective clothing- instrument specifications and assuming many of the administrative task formally assigned to the Health Physics Supervisor.
- 1975 - 1980 Employed by Washington Public Power Supply System as the WNP-2 Health Physics Supervisor. (WNP-2 is a Boiling Water Reactor). Six Health Physics/Chemistry technicians were under my direct supervision. The position required an interface with other nuclear power stations located in the United States. I evaluated all Health Physics applicable NRC regulatory guides & documents for possible WNP-2 impact. I represented my company at various nuclear power industry functions.
- 1974 - 1975 Employed at Westinghouse Hanford Corp. (HEDL) as an Operational Health Physics Analyst (Specialist II).
- 1967 - 1974 Employed by Argonne National Laboratory at the EBR-II site (Idaho Falls, Idaho) as a Senior Reactor Radiation Safety Technician. I was assigned to a rotating shift reactor operating crew for six years as the Shift Radiation Safety Technician. I authored several procedures (for Radiation Safety and Reactor Operator Training).

1965 - 1967 Employed by Argonne National Laboratory at the Lamont, Illinois site as a radiation safety technician. I was involved in R & D laboratory radiation safety work, personnel surveying, dosimetry (neutron film reading, etc.), and many other laboratory and reactor orientated radiation safety duties.

1964 - 1966 Employed by the Logan Long Roofing and Building Manufacturing Co., Chicago, Illinois as the Quality Control Supervisor and Chief Chemist. Responsibilities included assuming a quality final product and insuring that raw material (primarily asphalts) specifications were met.

1964 - 1966 Employed by Bird & Son Roofing & Building Materials Manufacturing Co. as the Assistant Quality Control Supervisor & Chief Chemist. Duties were primarily to perform physical measurements on the final products and perform test on raw materials.

1958 - 1962 During this period I was employed in various part-time jobs while attending school. During the summer months I worked full-time at National Can Corp. (Chicago, Illinois) as a quality control technician.

PERSONAL INFORMATION

BIRTHDATE: February 23, 1937
Chicago, Illinois

MARRIED: Three children - two girls, ages eighteen (18) and sixteen (16);
one boy, age eleven (11)

HEALTH: Excellent

FINANCES: Home mortgage - no other debt incumberances

HOBBIES: Golf, fishing, hunting, bowling

MILITARY: United States Navy Radarman from March 15, 1954, to January 13, 1958, active duty - 1958 to 1962 inactive. Honorable separation and discharge.

PERSONAL REFERENCES

R.E. Cecil
335 8th Street
Idaho Falls, Idaho 83401
Phone (208) 523-3234

Kenneth Dearden
3333 Handley Avenue
Idaho Falls, Idaho 83401
Phone (208) 522-8045

Walter Carlson
Richards Road
Phone (509) 786-1478

REFERENCES AVAILABLE: (Employment)

Irving E. Jones
420 8th St.
Idaho Falls, Idaho 83401
Business Phone (208) 526-7380

E.O. Graham
1245 Homer
Idaho Falls, Idaho 83401
Business Phone (208) 526-7393

Ralph A. Cooley
NRC Headquarters
Bethesda, Maryland
Business Phone (301) 973-7476

R. Graybeal (WPPSS; WNP-2
Health Physics/Chemistry
Supervisor)
P.O. Box 968
Richland, Washington 99352
Mail drop 927K
Business Phone (509) 377-2501
Ext. 2276

Brent Cederquist
Paloverde Nuclear Power Station

RESUME

Name: John O. Parry

Education:

- o B.S. in Applied Physics - 1974
Michigan Technological University
- o 20 credits toward Master of Science Degree in Material Science - 1980
Washington State University

Short Courses:

- o Health Physics Course - Two week
Rockwell International - 1976
- o Preparation for Health Physics Certification Examination
Dr. M. Scrabel - 1979

Experience:

October 1974 to
June 1978

Unit 1 Health Physicist
Dresden Nuclear Power Plant,
Commonwealth Edison, Morris, Illinois

Was responsible for the routine health physics activity of Dresden Unit 1. Worked with health physics technicians in establishing controls for tasks in radiation areas. Trained new technicians and radiation workers in health physics. Participated in an experiment to chemically clean a test loop on Unit 1 with Dow Chemical Corporation. The successful completion of this led to the decision to chemically clean the entire primary system of Dresden 1 to reduce the radiation levels.

June 1976 to
November 1978

Lead Health Physics for Dresden Units 1, 2, 3
Dresden Nuclear Power Plant,
Commonwealth Edison, Morris, Illinois

Responsible for the daily health physics activities at Dresden 1, 2, and 3. Trained technicians in health physics, supervised contracted technicians during outages, calibrated instruments, developed procedures for the health physics program and supervised three unit health physicists.

November 1978 to
May 1980

Radiation Protection/Chemistry Supervisor
Dresden Units 1, 2, 3
Dresden Nuclear Power Plant,
Commonwealth Edison, Morris, Illinois

Responsible for all health physics and water chemistry activities at a three unit BWR. Supervised a department of thirty-eight technicians, four health physicists, four chemists and three foremen.

1980 to
Present

Health Physicist
Washington Public Power Supply System
Richland, Washington

Provide power reactor health physics support to WNP-2 during construction, startup and operations. Responsibilities include developing an ALARA program, drafting procedures, training technicians in health physics, auditing of the health physics program, performing reviews on the design of systems installed at WNP-2 to identify potential ALARA problems, and reviewing regulation for potential impact on the industry.

Awards and Publications:

- o Certified Health Physicist - 1980
(Power Reactor and Comprehensive Certification)
- o "Electro Chemical Decontamination of Control Rod Driven - Dresden-1"
American Nuclear Society Annual Meeting, 1981
Transactions Volume 38 (page 622)

Professional Societies

Columbia Chapter - Health Physics Society
National Health Physics Society
American Nuclear Society

EDUCATION OF HEALTH PHYSICS/CHEMISTRY TECHNICIANS

NRC Position:

NUREG-0731 and Section 4.5.2 of ANSI 18.1 specify that technicians have two years experience in their specialty. The applicant has proposed that technicians at WNP-2 function in two specialties, health physics and chemistry, with only two years of training. Health Physics appraisals at operating plants have found that such combined health physics/chemistry technicians have lead to poor performance in both specialties because the technicians do not receive adequate training, qualification and retraining in both specialties. Until the staff can discuss this item further with the applicant, we will consider this an open item.

Response:

Technicians at WNP-2 do function in both the Health Physics and Chemistry specialties. This arrangement is maintained for several reasons:

- (1) Much of the equipment, procedures, and training required of the two specialties overlap (i.e., counting room operation).
- (2) Quality of performance in the chemistry area has a significant impact on the health physics function.
- (3) Safe performance of the chemistry function requires a high level of health physics expertise.
- (4) The dual specialties allow greater flexibility of manpower, thereby helping to assure that the appropriate type and level of coverage is available as needed.

The Supply System recognizes that the dual specialties places additional demands on the technicians and has responded accordingly with careful personnel selection and an extensive training and qualification program.

The Supply System Health Physics/Chemistry Technician training program encompasses four years and includes both academic and practical on-the-job training.

The formal classroom training consists of approximately 250 hours of health physics related course work and 250 hours of chemistry/radiochemistry academic training. Each subject area is evaluated by a documented examination.

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The four-year program additionally uses documented demonstration of specific skills in both the health physics and chemistry functions. Each technician must demonstrate his/her competence to perform specified skills before being allowed to conduct that task independently.

Exceptions to the training and qualification program are permitted only when hiring experienced technicians. Each experienced technician is evaluated on a case-by-case basis at the time of hire. The Health Physics/Chemistry Manager (RPM) specifies the level of placement in the training and qualification program. The first six months of on-the-job performance is used to re-evaluate placement and adjust as appropriate.

While technicians in training are permitted to perform tasks for which they have demonstrated applicable skills, they are not designated as journeymen until they have progressed from the point of entry in the training and qualification program through completion.

After attainment of journeyman status, the technicians proficiency is maintained through the Continuing Training Program. Continuing training includes rotation of work assignments through a full spectrum of health physics and chemistry duties and regularly scheduled training presentations. Examples of continuing training include:

- o refresher training on selected topics,
- o new or revised procedures,
- o new equipment,
- o radiological and chemical characteristics of plant systems,
- o new or revised regulations, and
- o new health physics or chemistry practices.

Additionally, the Health Physics and/or Chemistry Supervisor may prescribe retraining in an area where a need is recognized.

