

Idaho State UNIVERSITY

Office for Research
921 South 8th Avenue, Stop 8130 • Pocatello, Idaho 83209-8130

50-284

September 21, 2018

United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attention: Mr. Xiaosong Yin

Dear Mr. Yin:

Idaho State University requests an amendment to USNRC License R-110 to replace Dr. Richard Brey with Mr. John Longley, as the Radiation Safety Officer.

A copy of Mr. Longley's CV is included with this amendment request as an attachment. Mr. Longley currently serves as the Radiation Safety Manager for Idaho State University. In this position he provides support for radiation safety, hazardous and radioactive waste management, and transportation of radioactive and hazardous materials. He also tracks the inventory of radioactive materials and nuclear materials to comply with NRC regulations. Mr. Longley trains and leads technicians in performing daily quality assurance checks for radiological instrumentation, operational surveys for contamination and dose rate, leak test of radioactive sources, and acquisition of gamma ray spectra.

I thank you in advance for your consideration and cooperation on this requested amendment to USNRC license R-110. If you have any questions or require any more information, please contact me at vanderschyf@isu.edu.

Respectfully submitted,



Dr. Cornelis Van Der Schyf
Vice President for Research and Dean of the Graduate School

Attachment

MOD6
A020
NRR

John Longley, CHP
4885 Kim Dr.
Pocatello, ID 83204
Phone: 505-282-5652
Email: longjohn@isu.edu

Certification: Comprehensive Certification in Health Physics, American Board of Health Physics, 1995

Education:

Georgia Institute of Technology, Master of Science, Health Physics, 1986

Augusta College, Bachelor of Science, Physics (Math minor), 1985

Job Related Training:

Advanced Mixed Waste Transportation - May 2016

OSHA HAZWOPER, 1987, Current 8 hour refresher

Introduction to Nondestructive Assay - June 2010

McCoy RCRA Training

Work Experience:

Idaho State University 05/2015 to present:

Mr. Longley serves as the Radiation Safety Manager for Idaho State University. In this position, he provides support for radiation safety, hazardous and radioactive waste management, and transportation of radioactive and hazardous materials. He also tracks the inventory of radioactive materials and nuclear materials to comply with NRC regulations regarding control of radioactive material. Mr. Longley trains and leads technicians in performing daily quality assurance checks for radiological instrumentation, operational surveys for contamination and dose rate, leak test of radioactive sources, and acquisition of gamma ray spectra.

Specific projects implemented by Mr. Longley include radiological safety assessment for operation of e-LINAC accelerators up to 48 MeV and a positive ion Van De Graf accelerator. He has developed methods for radioactive waste characterization using portable gamma spectroscopy. Using both gamma spectroscopy and liquid scintillation counting he has characterized radioactive waste. In addition, he has worked with chemistry personnel to characterize liquid hazardous waste using ICP/MS to determine if the material exhibited the toxicity characteristic or contained underlying hazardous constituents. Mr. Longley has shipped radioisotopes produced at ISU to other universities and pharmaceutical companies in accordance with IATA regulations and shipped radioactive materials between ISU facilities in compliance with DOT regulations. He has transferred and received nuclear materials to and from DOE facilities in accordance with requirements of the Nuclear Materials Management Safeguards and Security System. Mr. Longley also performed dose modeling for air emissions from ISU facilities to demonstrate compliance with the NRC

constraint on air emissions and summarized dosimetry results from area and environmental monitoring to ensure no members of the general population could be exposed above applicable NRC standards.

Weston Solutions Inc. Albuquerque, Processing Specialist, 04/1998 – 05/2015

Mr. Longley served as the team leader for legacy radioactive waste and excess nuclear material processing at Sandia National Laboratories. The team safely characterized, packaged, and disposed significant quantities of legacy radioactive waste both low-level and transuranic, mixed hazardous and radioactive waste, and nuclear material accumulated from decades of nuclear research. As team leader for waste processing operations, Mr. Longley developed a program for safely characterizing radioactive and mixed low-level waste and for segregating it into appropriate waste streams for disposal. He used broad experience in radiation safety, industrial hygiene, and physical safety to develop the program in accordance with the DOE Integrated Safety Management System. Mr. Longley developed procedures for work planning including all aspects of worker safety, operation of glove boxes, assay of nuclear material with an active well neutron coincidence counter, and transportation of fissile material in Type A fissile containers. In waste processing operations, Mr. Longley oversaw the work of three professional staff and up to six technicians.

Mr. Longley developed and implemented over one hundred job specific work plans for processing radioactive and mixed waste. These work plans addressed hazards and controls for processing all types of radioactive material including fission products, activation products, tritium, uranium, transuranic isotopes and sealed radioactive sources, controlling exposure to hazardous chemical such as toxic metals, acids, and solvents, and controlling physical hazards such as lifting heavy objects and safely handling pressure and electrical systems. Plans specified required engineering controls, personal protective equipment, respiratory protection equipment when necessary and radiological and chemical monitoring equipment for ensuring safety in real time operations. Plans also included prospective dose estimates to ensure worker exposures were as low as reasonably achievable and would not violate administrative control limits.

Mr. Longley served as Radiation Safety Officer for the Radioactive Waste and Nuclear Material Disposition Department. In this role, Mr. Longley performed programmatic review of all operations regarding radiation safety.

Mr. Longley also served as an expert resource for transportation of radioactive waste, hazardous waste, and fissile material including packaging, labeling and manifesting.

From these operations, Mr. Longley has extensive experience with radiation safety, industrial hygiene, transportation of hazardous materials, physical safety, contamination control, operation of field instruments for measuring dose rates and contamination levels, and safe handling of radioactive material and sources. He also has extensive experience characterizing waste materials using gamma spectroscopy, liquid scintillation, surface contamination surveys, and neutron measurements for fissile materials.

Benchmark Environmental Corporation, Albuquerque, NM, Health Physicist, 06/1991 - 04/1998

For Los Alamos National Laboratory, Mr. Longley performed a wide variety of tasks supporting transuranic waste operations, low-level waste operations, and environmental monitoring. He designed a database for managing all data associated with the nondestructive assay and nondestructive examination of TRU waste

at LANL. The database was designed to store all pertinent data, track quality assurance issues, compute radiological summary values, and generate summary reports. Mr. Longley wrote a design specifications report and a validation report for LANL TRU waste database to ensure all computations related to waste acceptance at the WIPP were performed correctly. Mr. Longley developed technical procedures for nondestructive assay and examination of TRU waste at LANL. These procedures defined all operational aspects steps necessary to operate mobile passive/active neutron assay, segmented/tomographic gamma scanning, and mobile real-time radiography systems.

Mr. Longley identified statistical methods for characterizing mixed waste to determine whether it exhibited toxicity characteristic under RCRA. This two-phase approach to sampling allowed cost-effective waste characterization. In addition, he developed a hazard analysis of disposal of high-activity tritium waste at LANL. This hazard assessment addressed fate and transport of tritium in elemental gaseous form, as water vapor, and in molecular sieve particles containing tritiated water. The hazard analysis assessed impacts to workers and the general population and demonstrated that this waste could safely be disposed.

For the Waste Isolation Pilot Plant, Mr. Longley developed a procedure for verifying compliance with the National Emissions Standards for Hazardous Air Pollutants for radionuclides. This procedure specified methods for collecting air samples, compiling the total release source term, estimating dose equivalents to the maximally exposed individual, and reporting the results to the EPA. Mr. Longley also developed a quality assurance project plan for radiological monitoring of airborne effluents from the WIPP that specified overall quality assurance measures for monitoring airborne effluent for the exhaust stacks at the WIPP.

Chem-Nuclear Environmental Services, Albuquerque, NM, Health Physicist, 10/1989 - 06/1991

Mr. Longley served as acting manager for Environment, Dosimetry, and Verification for the remedial action contractor on the Uranium Mill Tailings Remedial Action (UMTRA) Project. In this capacity he managed dosimetry data, ensured conformance with radiological protection standards, and environmental protection standards. He also managed the production of the annual environmental report and environmental compliance summary for the UMTRA Project.

Roy F. Weston, Inc., Albuquerque, NM 04/1987 - 10/1989

For the technical assistance contractor on the UMTRA Project, Mr. Longley developed radiological sections of conceptual designs for mill tailings disposal sites to ensure the predicted radon releases met EPA design standards. He assessed radiological dose impacts of the uranium mill tailings disposal process to support environmental assessments required by NEPA. Mr. Longley reviewed completion reports for UMTRA vicinity properties to verify that remediation was conducted in accordance with cleanup standards.

Computer Skills: Proficient in Microshield, Microsoft Word, Excel, and Access. Significant experience with structured query language.