A. IDENTIFICATION

Position Title: Program Manager, EHRS (Ionizing Radiation Safety)

Name of Employee: 

Department: Environmental Health & Research Safety

Position Reports To (Title): Director, Research & Laboratory Safety

Description Prepared by: Terry Waterhouse

Date: January 26, 2015

B. POSITION SUMMARY

Briefly describe the primary function and purpose of the position in one or two sentences.

The Program Manager, EHRS (Ionizing Radiation Safety) acts as the Radiation Protection Officer (RPO) for the University and manages and administers the University ionizing radiation safety program to ensure compliance with the Canadian Nuclear Safety and Control Act and its regulations, the Nuclear Substances and Radiation Devices License issued to Simon Fraser University by the Canadian Nuclear Safety Commission (CNSC), SFU policy R20.04 (Radiological Safety), the Health Canada Safety codes, the WorkSafeBC regulation, and all other applicable international, federal, provincial, and municipal regulations. The Program Manager, EHRS (Ionizing Radiation Safety) establishes, authorizes, monitors, and regulates safe work procedures using nuclear substances and radiation devices; advises on research programs using radioactive materials; develops and delivers safety training courses and certifies participants; manages the radionuclide facility and technical staff; develops and administers programs for personnel radiation monitoring; manages emergency response to radiological incidents; and proposes strategy, policy and procedures relevant to ionizing radiation.

C. DUTIES AND RESPONSIBILITIES

Starting with those you consider the most important, list and describe the main duties and responsibilities of the position. For each item start with an action verb and briefly describe WHAT is done, HOW it is done and WHY it is done. Indicate in the right hand column the percentage of time spent on each particular task.

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<tr>
<th>Description</th>
<th>% of Time</th>
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<tr>
<td>General</td>
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<tr>
<td>• Serves as the University Radiation Protection Officer (RPO); acts as the University’s representative in consultation with the Canadian Nuclear Safety Commission, Health Canada, and WorkSafeBC on ionizing radiation issues; participates in federal and provincial reviews of regulations; and monitors and reviews regulatory changes for impact on the ionizing radiation safety program and recommends program revisions.</td>
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<td>• Oversees a program for the packaging, shipping, receiving, and handling of nuclear substances and radiation devices; and ensures that all University personnel requiring Class 7 TDG certification for radioactive materials are identified and certified.</td>
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<tr>
<td>• Manages procedures and maintains documentation for the acquisition, receipt, transfer, storage and disposal of all radioactive materials, radiation emitting devices, and radioactive waste.</td>
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<td>• Administers and manages an internal University permit system for research and teaching activities using nuclear substances and radiation devices: performs risk assessments of, and advises on, proposed research and teaching involving nuclear substances and radiation devices and establishes and authorizes safe work conditions in accordance with regulations and policies and authorizes the issuance of internal permits under the signature of the Director, Research and Laboratory Safety.</td>
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<td>• Conducts annual audits of the ionizing radiation safety program and prepares a comprehensive annual report on license activities for submission to the Canadian Nuclear Safety Commission. Prepares an annual internal compliance report for</td>
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distribution to the SFU Vice-President, Research; the Director, Radiation & Laboratory Safety; and the University Radiation Safety Committee (URSC), outlining strategic priorities, identifying deficiencies, and recommending remediation actions.

- Prepares the application for renewal of the University Nuclear Substances and Radiation Devices License for submission to the Canadian Nuclear Safety Commission; liaises with the CNSC Inspectors during annual license compliance inspections and other audits and follows up on inspection results and remediation efforts to achieve compliance with deficiencies in the program.
- Collaborates with the Program Manager, EHRS (Non-Ionizing Radiation) to conduct annual internal inspections of laboratories operating under internal permits.
- Administers and manages the import and export of risk-significant nuclear substances and radiation devices for conformance with the IAEA Code of Conduct on the Safety and Security of Radiation Sources and CNSC regulations. Serves as the applicant to the CNSC for radioisotope import or export permits on behalf of the University.
- Makes immediate preliminary reports to the CNSC in the event of an unauthorized release of radioactive material to the environment, radioactive spills in excess of regulatory limits, personnel exposure to radiation potentially in excess of regulatory limits, serious illness or injury as a result of license activity, any breach of security (actual or attempted) or sabotage involving radioisotopes or sealed sources, work disruptions (actual or planned) by University personnel, and the failure of any instrument or equipment that may contribute to a serious health risk. Prepares and submits a full report to the CNSC within twenty-one days of an incident or event. Analyses and evaluates such events or incidents and implements corrective measures to prevent reoccurrences.
- Authorizes and enforces temporary cessation work orders involving radioactive hazards in situations where there is imminent danger to the individuals involved, the campus community, or the environment.
- In consultation with the University Radiation Safety Committee, Director, Research and Laboratory Safety, Facilities Services, and Campus Security, evaluates the security of nuclear substances and radiation devices on campus and establishes and implements procedures to avoid theft, sabotage, mischief, and/or breach of security.
- Reviews, advises on and approves new construction or modifications of existing radionuclide laboratories or facilities to conform to CNSC regulations and oversees the decommissioning of internally permitted laboratories or facilities.
- Identifies and designates individuals as Nuclear Energy Workers (NEWs) under CNSC regulations.

**Safety Training and Education**

- Administers and delivers radiation safety training to all University employees, students, and all external workers that handle or come in contact with nuclear substances and radiation devices.
- Monitors and evaluates safety training program effectiveness and implement systems to track participants.
- Researches, develops and prepares the SFU Radiation Safety Manual of Policies and Procedures and updates the manual as required in response to changing regulations or local conditions.
- Collaborates with the other Program Managers in EHRS and updates the EHRS website as required.
- Develops a radiation safety strategy to foster a positive safety culture at the University and to communicate emerging safety information to radioisotope permit holders and users.
- Provides accurate and responsible information to lay public regarding radiation hazards as required.

**Radionuclide Facility**

- Manages the operation, use and maintenance of the Radionuclide Facility; sets priorities on the use of the facility, equipment, and technical personnel; and coordinates lab renovations and special projects.
- Supervises the Radiation Safety Technician.
- Ensures an inventory is maintained of equipment and supplies, and requisitions goods, services, and repairs by purchase orders and internal work orders.
**Administrative/Professional Position # 31500 Program Manager, EHRS (Ionizing Radiation Safety)**

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<th>Dosimetry and Ionizing Radiation Monitoring Programs</th>
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<td>- Oversees a program for personnel radiation monitoring of all University personnel that handle nuclear substances and radiation devices; administers bioassay programs for personnel monitoring during exposure to radiation; and evaluates and recommends the effective use and performance of engineered safety systems.</td>
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<td>- Identifies laboratory research projects and individuals requiring radiation related health surveillance and directs and oversees the implementation of appropriate measures to monitor personnel exposures to radiation.</td>
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<td>- Monitors and reviews quarterly reports of radiation exposure and investigates unusual exposure or exposures that exceed regulatory limits. Reviews and revises laboratory protocols to reduce unnecessary exposure, protect user safety, and maintain compliance.</td>
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<tr>
<td>- Participates in Health Canada audits of bioassay programs for ingestion, inhalation or other exposures to radioactive materials; monitors results and corrects or repairs equipment and protocols to ensure that current SFU bioassay protocols meet regulatory standards.</td>
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<tr>
<td>- Oversees regulatory specified programs for monitoring, evaluating and verifying the operational efficiency of all campus radioactive testing and equipment and maintains records. Oversees a program for leak-testing of sealed sources and sources in devices by conducting sampling and measurements.</td>
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<th>Emergency and Incident Response</th>
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<td>- Develops emergency response procedures for radiation hazard incidents.</td>
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<td>- Responds to radiation safety incidents and directs emergency responses; investigates the cause of incidents, reports outcomes, and recommends mitigating actions to the CNSC.</td>
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<td>- Develops and maintains relationships with off-campus safety professionals including fire-fighters, Hazardous Materials Response Team, RCMP, B.C. Centre for Disease Control and other campus and hospital Radiation Safety Advisors/Officers to facilitate coordinated emergency responses.</td>
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<th>Other Duties</th>
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<td>- Act as back-up for the Director, Research &amp; Laboratory Safety and the Program Manager, Non-Ionizing Radiation and X-ray Safety during periodic leaves of absence.</td>
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<td>- Act as the back-up Radiation Safety Officer for the class II nuclear facility.</td>
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<td>- Reports to the University Radiation Safety Committee.</td>
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<td>- Participates on, the Central University Health and Safety Committee and other University safety committees.</td>
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<td>- Participates in training sessions, workshops, meetings, and conferences to maintain an up-to-date knowledge of radiation safety issues and management; training and emergency response; and regulatory changes. Assists with risk assessments and participates in incident investigations, including incidents in public spaces. Recommends corrective actions and follow up to confirm incidents are documented and deficiencies are addressed.</td>
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<td>- Participates in federal and provincial reviews of regulations and monitors regulatory changes for impact on the ionizing radiation safety program.</td>
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<td>- Supports the other Program Managers, EHRS, in Research &amp; Laboratory Safety.</td>
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**D. DECISION MAKING**

i) Give some typical examples of the most important decisions the incumbent is expected to make in carrying out the duties and responsibilities of the position. To what extent can the incumbent rely on established policies or advice from others in making these decisions?

Makes decisions to immediately halt operations and/or evacuate a site that s/he considers unsafe if s/he judges them to pose an imminent threat to life and health due to the uncontrolled release of a radiological material; the required components of the ionizing radiation safety program; the approval of internal permits for proposed research and teaching procedures and safe operating procedures; the designation of Nuclear Energy Workers (NEW); the response to spills and other incidents involving excessive personal exposures to radioactive materials or devices; the monitoring of compliance status; the assessment of regulatory requirements and
proposed regulatory changes and the impact on policies and procedures; the assessment of the requirements for import and export of risk significant nuclear substances and radiation devices; and supervisory decisions regarding hiring, performance evaluation, professional development, workload allocation, and discipline of technical staff.

Makes recommendations for the construction or renovation of radioactive-containment facilities, the acquisition of radiation safety equipment, and security measures for nuclear substances and radiation devices.

**ii) Give some examples of the types of decisions the incumbent would refer to his/her supervisor.**

Refers decisions relating to final program direction; sensitive or contentious issues involving either internal or external contacts; long-term closure of laboratories in non-compliance with safety regulations; serious staff performance issues and recommendation for termination; substantial financial risk management implications for the university; and purchases with major budgetary impact on unit finances.

**E. SUPERVISION EXERCISED**

*Indicate the number of continuing employees for whom the position is responsible.*

Number of employees reporting directly to the position: 1

Total number of employees for whom the position has direct responsibility: 1

**F. SUPERVISION RECEIVED**

*Describe the extent to which the supervisor determines the day to day work load of the position and assists in the completion of duties. Explain the nature of guidance received and how often work is checked or reviewed.*

Works independently under authority delegated by the University Radiation Safety Committee (URSC) to meet defined program goals established by University policy and federal legislation and statutes. Work is subject to periodic review by, and in consultation with the Director, Research & Laboratory Safety. The incumbent informs the Director of extraordinary issues, incidents and emergencies, and proposed changes that may impact finances.

**G. UNUSUAL WORKING CONDITIONS**

The incumbent must be available 24/7 for consultation on incidents involving hazardous exposure or releases. The incumbent is subjected to potential risks of a nuclear energy worker. The incumbent is subject to a criminal background check in accordance with the regulations of the Canadian Nuclear Safety Commission. Requires travel to all university campuses. Attendance at meetings, workshops, and seminars presented at external sites is also required.

**H. ENTRANCE QUALIFICATIONS**

*What combination of experience, training and/or formal education do you believe is the minimum required to perform the duties of this position?*

Undergraduate degree in Science with a specialization in chemistry, radiochemistry, health physics, or another related field, and four years of related work experience including experience with the application of the regulations of the Canadian Nuclear Safety Commission, Health Canada, WorkSafeBC, and all other related international, federal and provincial regulations, or an equivalent combination of education, training, and experience.

- Ability to obtain and hold relevant professional designations/certifications including certification as a Radiation Safety Officer as specified in the Canadian Nuclear Safety Commission Class II Nuclear Facilities and Prescribed Equipment Regulations and Regulatory Document 2.2.3 Human Performance Management: Personnel Certification: Radiation Safety Officers.
• Excellent knowledge of the application of the regulations of the Canadian Nuclear Safety Commission, Health Canada, WorkSafeBC, American National Standards Institute (ANSI), and all other related international, federal and provincial regulations.

• Excellent knowledge of ionizing and non-ionizing radiation, X-ray, laser, and electromagnetic radiation safety principles and practices.

• Excellent knowledge of laboratory operations and the ability to conduct assessments of research laboratory facilities in terms work techniques and procedures and hazards.

• Excellent knowledge of the principles and practices of radiation dosimetry and demonstrated ability to plan, organize and manage a program for personnel radiation monitoring.

• Excellent knowledge of the application and operation of radiation monitoring devices and equipment.

• Ability to bring together divergent perspectives and secure consensus in decision making in the development and implementation of radiological safety programs and to establish and maintain effective working relationships with both internal and external contacts.

• Ability to deliver training programs.

• Ability to conduct risk assessment analyses and to develop and present action plans.

• Excellent program auditing skills.

• Excellent research skills.

• Excellent organizational, problem-solving, and analytical skills.

• Excellent interpersonal, and communications skills (oral, written, and presentation).

• Ability to arrange suitable transportation when travelling to other campuses and work locations.

• Ability to undergo a criminal background check and meet requirements in accordance with the regulations of the Canadian Nuclear Safety Commission

I. ORGANIZATIONAL RELATIONSHIPS

(30355) Senior Director, Environmental Health & Research Safety

(01642) Safety Assistant

(98831) Director, Occupational Health & Trades Safety

(114637) Program Mgr., EHRS (Indoor Environmental Quality)

(104900) Program Mgr., EHRS (IAQ & Trades Safety)

(31305) Program Mgr., EHRS (Environmental & Safety Management Systems)

(99033) Director, Research & Laboratory Safety

(106195) Program Mgr., EHRS (Non-Ionizing Radiation and X-ray Safety)

(112798) Program Mgr., EHRS (Biosafety & Laboratory Safety)

(113589) Program Mgr., EHRS (Chemical Safety & Hazardous Waste)
(31500) Program Mgr., EHRS
(Ionizing Radiation Safety)

(108875) Technician, gr. 10