

SEIU-West:

**Submission to the Government of
Saskatchewan's Review of the Radiation
Health and Safety Regulations, 2005**

Submitted October 1, 2021



INTRODUCTION

SEIU-West was first informed of the review of the *Radiation Health and Safety Regulations, 2005 (RHSR)* by a letter from the Honourable Don Morgan, Minister of Labour Relations and Workplace Safety (MLRWS), to SEIU-West President Barbara Cape, dated July 30, 2021.

SEIU-West represents more than 13,000 members in health care, long-term care, community-based organizations, education, and municipalities, among other sectors. Most notably for the purposes of the current review, we represent Medical Radiation Technologists, Magnetic Resonance Imaging Technologists, Combined Laboratory and X-Ray Technologists, Nuclear Medicine Technologists, and Diagnostic Medical Sonographers employed by the Saskatchewan Health Authority in the former Saskatoon, Cypress, Five Hills, and Heartland Health Regions.

Our submission was informed by:

- A review of the discussion paper prepared by MLRWS;¹
- A review of the current *RHSR*² and the relevant parts of their enabling Act, the *Saskatchewan Employment Act (SEA)*;³
- A scan of comparable legislation in other Canadian jurisdictions;⁴
- Outreach to the Saskatchewan Association of Medical Radiation Technologists (SAMRT), the Saskatchewan Association of Combined Laboratory and X-Ray Technologists (SACLXT), and Saskatchewan Association of Diagnostic Medical Sonographers (SADMS); and
- A survey of SEIU-West members who are exposed to radiation in their workplace.

MEMBER SURVEY: METHODS AND RESULTS

Whenever SEIU-West participates in public or stakeholder consultation processes, we reach out to our membership, focusing in particular on workers in the most directly affected workplaces and/or job classifications.

In this case, we designed an online survey,⁵ incorporating feedback from a Radiation Safety Officer. The questions were a mix of multiple-choice and open-ended questions about the respondent's job and workplace, the type and frequency of their workplace exposures to radiation, and their assessment of radiation risk communication and safety in their workplace.

¹ Saskatchewan. Review of *The Radiation Health and Safety Regulations, 2005*. [n.d.] <https://publications.saskatchewan.ca/api/v1/products/113901/formats/128149/download>

² *The Radiation Health and Safety Regulations, 2005*. RRS c R-1.1 Reg 2. <https://publications.saskatchewan.ca/api/v1/products/9623/formats/14595/download>

³ *The Saskatchewan Employment Act*. SS 2013, c S-15.1. <https://publications.saskatchewan.ca/api/v1/products/70351/formats/78194/download>

⁴ Starting with the following search of the Canadian Legal Information Institute (CanLII) database: <https://www.canlii.org/en/#search/type=legislation&text=radiation>

⁵ Using the Alchemer (formerly Survey Gizmo) platform.

The survey was open from September 10 to 19. It was publicized as follows:

- an email September 10 to members in select classifications (Medical Radiation Technologist, Magnetic Resonance Imaging Technologist, Combined Laboratory and X-Ray Technologist, Nuclear Medicine Technologist, and Diagnostic Medical Sonographer) and departments (former Saskatoon Health Region Diagnostic Imaging, including Porters and Medical Office Assistants)
- an item in the September 10 and 17 editions of SEIU-West President Barb Cape’s weekly email update, emailed to approximately 6,000 subscribers; and
- a public post on the SEIU-West Facebook page on September 13.

In all of the above, the message included links to the survey, the current *Radiation Health and Safety Regulations*, and the Ministry’s discussion paper.⁶

We received 64 complete responses that reported at least some workplace exposure to radiation.⁷ The following table breaks down the exposures by source/type:

	% of respondents reporting exposure
Ionizing radiation	
X-rays/x-ray equipment	93.8
Radioactive materials (supplies, isotopes, waste)	15.6
CT scanners	14.1
Non-ionizing radiation	
Ultrasounds	21.9
Lasers	9.4
Magnetic Resonance Imaging (MRI) equipment	7.8

⁶ The message included the following statement:

Saskatchewan’s Ministry of Labour Relations and Workplace Safety is reviewing the Radiation Health & Safety Regulations. These regulations have not been updated since 2005. They have invited SEIU-West to make a submission with our recommendations. We have an obligation to advocate on behalf of our members’ health and safety, so we are reaching out to you, the front-line experts, with a brief survey. The Ministry has prepared a discussion paper on what they think are the most needed changes, but they indicate they are open to any suggested improvements. Your responses will help us to prepare a submission that properly reflects your experiences and concerns.

⁷ As determined by their responses to the following question:

Which of the following sources and types of radiation are you exposed to at work? (Check all that apply)

- X-rays/x-ray equipment
- Radioactive materials (supplies or waste)
- Ultrasounds
- CT scanners
- Lasers
- Magnetic Resonance Imaging (MRI) equipment
- Other - Write In: _____
- None--I am not exposed to radiation in my job

The listed options were chosen based on the types of ionizing and non-ionizing radiation specifically mentioned in the *Radiation Health and Safety Regulations* and/or in Part V—Radiation Health and Safety of the *Saskatchewan Employment Act*. Ultraviolet and radiofrequency radiation (including microwaves) are also mentioned in the Regulations, in Part III, Divisions 1 and 5 respectively; no responses mentioned them.

61% of respondents reported being exposed to radiation in the workplace every day; 85% of those respondents said they were exposed “all day” or “many times” each work day.

Respondents were overwhelmingly female (82.8%). About half (53.1%) work in Saskatoon, and about half (53.1%) work full-time.

As the following table shows, Medical Radiation Technologists (MRTs) made up about half of the respondents:

Job classification	% of respondents
Medical Radiation Technologist (MRT, including MRT Working Supervisor and Magnetic Resonance Imaging (MRI) Technologist ⁸)	48.1
Combined Laboratory & X-Ray Technologist (CLXT)	32.8
Nuclear Medicine Technologist (NMT)	6.3
Diagnostic Medical Sonographer (DMS)	6.3
Diagnostic Imaging Information System/Informatics Technologist	3.1
Unit Assistant	3.1

RECOMMENDATIONS

1. The regulation review must be clearly focused on protecting the health and safety of workers, not on reducing “regulatory burden” of radiation equipment owners

The Occupational Health and Safety Division of the MLRWS publicly asserts⁹ that the *RHSR* are part of Saskatchewan’s occupational health and safety (OH&S) legislation. Jurisprudence from Canada’s highest courts clearly asserts that OH&S legislation must be read as having a remedial purpose: protecting the health and safety of workers.¹⁰ SEIU-West is adamant that the *RHSR* must be drafted, interpreted, and applied accordingly; the convenience of owners and operators of equipment or other radiation sources must be secondary to this purpose. Unfortunately, the discussion paper’s use of words like “red tape”, “duplication”, and “reduce the regulatory burden on owners” suggests that the current review has lost sight of the overarching purpose.

The *RHSR* mention “owners” more than 80 times, about twice as often as the term “worker” appears. . The term “employer” is never used. There are two references to “an owner or operator who employs occupational workers or who is in charge of training occupational workers”. The *RHSR* should clearly recognize that a person’s status as a “worker” is determined

⁸ Just one respondent listed themselves as an MRI Technologist, whereas several respondents who listed themselves as MRTs also reported regular exposure to MRI equipment, suggesting that, as we have observed anecdotally in other contexts, many health professionals identify more closely with their professional designation than their job description.

⁹ See e.g. *Understanding Occupational Health and Safety in Saskatchewan* (2021). <https://publications.saskatchewan.ca/api/v1/products/91932/formats/108876/download>

¹⁰ See e.g. *Ontario (Labour) v. United Independent Operators Limited*, 2011 ONCA 33 (CanLII), <https://canlii.ca/t/2fcvr>

by their relationship to an employer, not by their relationship to a source of radiation or to whomever owns that source.

2. The *RHSR* must more clearly and fully articulate workers' right to be informed about potential radiation hazards

OH&S legislation, including the *RHSR*, must enshrine and enable the effective exercise of three fundamental worker rights: to know, to participate, and to refuse. The right to know is meaningless without a clearly articulated obligation on the employer to inform their potentially affected workers of potential hazards.

Alberta's *Radiation Protection Act*¹¹ provides an excellent example of how to articulate such an obligation in the context of radiation hazards:

6(1) Every employer shall ensure that workers employed by the employer who are likely to be exposed to radiation are informed of the potential hazards of the radiation and the precautions to be taken to protect the workers and other persons from those hazards.

The section further specifies that the employer must inform the affected employees of "known or suspected health hazards associated with the form of radiation emitted by the radiation source." "Radiation" is defined as including both ionizing and non-ionizing types, and "worker" includes any person covered by Alberta's OH&S statute.

Saskatchewan's *RHSR* falls well short of this standard. There is no general duty to inform; instead, there are only the following highly limited and unclear duties:

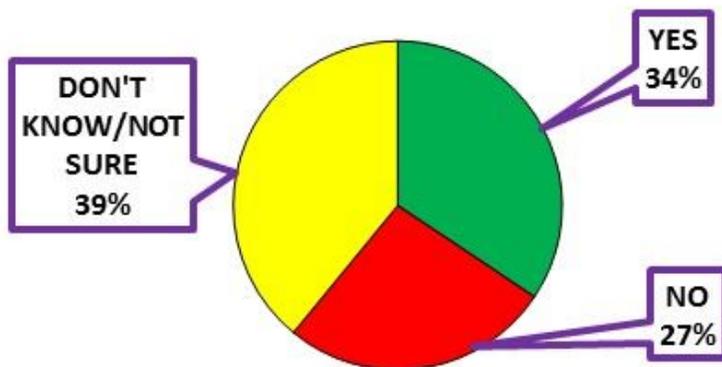
- Owners of certain types of laser equipment must "fully inform" a certain type of potentially affected worker (an "occupational worker" (OW)¹²) of "the hazards of this radiation under the conditions of use" and "draw [their] attention" to "the viewing restrictions that are indicated on the laser classification label." (s. 26)
- An "owner or operator" (of, the context suggests, "ionizing radiation equipment") who "employs occupational workers or who is in charge of training occupational workers" must
 - Periodically inform OWs of their cumulative dose (s.7)
 - Inform female OWs that if they "become aware" that they are pregnant must so inform the owner, and that they "should" inform the owner if they "suspect" they are pregnant (s. 8)

Adding to the *RHSR* a clear, overarching, enforceable employer duty to inform all workers could help address the most notable and alarming finding of our member survey: just 34% of respondents reported being informed of radiation hazards and risks by their employer.

¹¹ RSA 2000, c R-2, <https://canlii.ca/t/kxzs>

¹² The flaws of this concept are discussed in section 3 of this submission.

Has your employer given you information about the risks of radiation exposure in your workplace?



All of these respondents reported exposure to radiation (ionizing and/or non-ionizing) at work. All work for the Saskatchewan Health Authority. Nearly 60% are members of a regulated health profession (MRT, MRIT, or NMT—all regulated by SAMRT); a further 40% belong to classifications that are on the cusp of becoming regulated health professions (CLXT, DMS). Perhaps the employer assumes that these workers have acquired sufficient hazard awareness in their initial professional training and/or through continuing professional education mandated by regulated professions. However, there are dozens of non-professionals (e.g. porters and unit assistants) in Saskatchewan working in diagnostic imaging departments who may not even be aware that they are subject to radiation hazards at work—we sent our members in these classifications information about the survey, but heard from just two. A clear, general duty to inform would incentivize the employer to do more to ensure that all of its employees, regardless of classification, have at least a baseline level of awareness of the radiation hazards to which they might be exposed in the workplace.

3. The regulations and Part V of the *Saskatchewan Employment Act* must clearly and consistently protect all workers who may be exposed to radiation.

The *RHSR* focuses not on all workers who may be exposed to radiation, but a subset: “occupational workers” (OWs). The term appears about 50 times, most notably in reference to:

- ionizing radiation dose limits for OWs (e.g. s. 3 and Tables 6 & 7)
- requirements to monitor, record, and report OW doses (e.g. sections 5, 6, and 7)
- limits on OW exposure to UV radiation (sections 20 & 21)
- as mentioned above, a laser owner’s duty to inform OWs of the hazards associated with this type of radiation (s. 26)
- radiation equipment owner’s duties in the event of an OW’s accidental exposure to radiation (s. 41)

However, OW is not defined in the *RHSR*. It was defined in the *Radiation Health and Safety Act*, the *RHSR*'s original enabling legislation, but the *SEA* repealed and supplanted that act in 2014. Part V (Radiation Health and Safety) of the *SEA* does not define or use OW; instead, it uses the term "radiation worker" (RW), in three contexts:

- the government has the power to make regulations to protect RWs' health, particularly their reproductive health (s. 5-42);
- "Owners" of "radiation equipment" must, in accordance with what the regulations prescribe, keep records on RWs' exposure to radiation and other matters relating to their radiation health and safety (s. 5-15); and
- MLRWS-appointed provincial Radiation Safety Committee has the mandate to advise Minister on promoting and protecting RWs' health, including their reproductive health (s. 5-36)

The Act defines an RW as:

a person who, in the course of the person's employment duties, business, professional activities, studies or training:

- (i) *is exposed to radiation; and*
- (ii) *if exposure limits, exposure levels or dose limits are specified for members of the public, might receive radiation exposure in excess of those limits or levels*

"Specified" presumably means "prescribed in the regulations", i.e. the *RHSR*. So if the *RHSR* do not prescribe limits for "members of the public" the definition of RW is effectively empty. The *RHSR* does not in fact clearly prescribe limits for "members of the public": Table 6 prescribes dose limits for OWs, pregnant OWs, and "a person who is not an occupational worker", while Table 7 prescribes a dose limit for OWs and another for "any other person".

What workers is Saskatchewan's OH&S legislation protecting from occupational exposures to radiation? We do not have a clear, coherent, comprehensive answer. This is a huge flaw which the review must address; if it does not, it is ignoring the legislation's fundamental purpose, and the rest of the review's work would be in vain.

4. The regulations should increase the inspection frequency for mobile x-ray equipment.

Our member survey identified multiple safety concerns associated with the use of portable x-ray equipment, especially in rural health-care facilities. Members working with this equipment noted that it was often obsolete, and expressed concerns that appropriately sized lead aprons (necessary to protect staff in the absence of the kind of shielding normally in place around fixed location x-ray equipment) were in short supply. The discussion paper suggests that MLRWS is considering *RHSR* changes that would increase the frequency of inspections of this equipment. SEIU-West would welcome this change.

CONCLUSION

Our member survey suggests that when it comes to the hazards and risks of workplace radiation exposure, the SHA, a large employer with extensive communications, legal, and risk management resources, is not informing its employees in a manner that is registering effectively with them. This raises serious concerns about the extent to which smaller employers who own or control sources of radiation are effectively informing their workers about radiation hazards.

The *RHSR* must be revised, and the MLRWS sufficiently mandated and resourced, to ensure that all employees (regardless of job classification or arbitrary dose/exposure cutoff) in all workplaces (regardless of size or ownership structure) are clearly and effectively made aware of the health and safety risks of the radiation that may be present in their workplaces. SEIU-West acknowledges that as a workplace hazard, radiation, especially ionizing radiation and radioactive substances, is somewhat unique, in that it is subject to a degree and kind of federal jurisdiction¹³ and public misperception¹⁴ that other workplace hazards are not. However, it is our view that radiation should nevertheless still be regulated as far as possible like other workplace hazards: i.e. in a manner that fully acknowledges that:

- *RHSR* and Part V of the *SEA* are first and foremost OH&S legislation;
- OH&S legislation is remedial public interest legislation whose primary purpose is to provide maximal, effective protection to the health and safety of all workers; and
- this protection is made possible by a generous interpretation and effective enforcement of workers' rights (together with employers' corresponding obligations) to know, participate, and refuse.

¹³ See *Ontario Hydro v. Ontario (Labour Relations Board)*, 1993 CanLII 72 (SCC), [1993] 3 SCR 327, <https://canlii.ca/t/1fs10> and cases citing it.

¹⁴ Freudenberg LS, Beyer T. Subjective perception of radiation risk. *Journal of nuclear medicine* December 2011, 52 (Supplement 2) 29S-35S; DOI: <https://doi.org/10.2967/jnumed.110.085720>