

Foundation of a Radiation Safety Program (Nuclear)

1-Hour Webinar on August 9, 2017

Thank you for attending the webinar yesterday! I hope you found it to be informative. My apologies for the technical issues, particularly the sound issues at the end of the webinar. Below you will find all the answers to the questions that were asked as well as some useful resources for developing a radiation safety program and applying for a CNSC licence. If you have any further questions, please don't hesitate to contact me! You can reach me at thargreaves@radiationsafety.ca and 416-650-9090 x23.

Q1: Is it difficult to become an authorized trainer?

Answer:

There is no official authorization of trainers. The CNSC looks at training programs based on the topics the program covers. They may consider the qualification of the organization/individual providing the training.

It is helpful to consult the training guides:

http://nuclearsafety.gc.ca/pubs_catalogue/uploads/G-313_e.pdf

http://nuclearsafety.gc.ca/pubs_catalogue/uploads/REGDOC-2-2-2-Personnel-Training-v2-ENG.pdf

Q2: You mentioned check sources as a low level source. Do check sources have to be licensed?

Answer:

If the check sources are below an exemption quantity they do not have to be licensed. If they are above an exemption quantity, they require a licence. The exemption quantities are given in Schedule 1 of the Nuclear Substances and Radiation Devices Regulations. If there are multiple sources, there is an equation to calculate the exemption quantity as given in the interpretation section at the beginning of the regulations.

<http://laws.justice.gc.ca/eng/regulations/sor-2000-207/page-1.html>

Q3: Does the landlord acknowledgement have to be updated every time the licence is updated?

Answer:

The form has to be submitted as part of the licence application package, even for a renewal. I have always submitted a new form, but it is possible that submitting the original form would be fine. I'm not sure so it would be best to ask your licensing specialist.

The form can be found here:

http://nuclearsafety.gc.ca/eng/pdfs/Forms_Applications/cnsc-landlord-owner-acknowledgement-form-eng.pdf

Q4: Is the RS policy content based on some specific standard?

Answer:

The development of the radiation safety manual follows the CNSC licence application at a minimum, though you are free to add more to this if you wish. The thing to keep in mind is that whatever is submitted to the CNSC as part of the licence application becomes a legally binding procedure unless you word it carefully to make it clear that there are optional or nice to do procedures. The radiation safety requirements of the CNSC are based on many things including international recommendations from groups such as the International Commission on Radiological Protection (ICRP) and the International Atomic Energy Agency (IAEA), industry best practices, addressing issues they become aware of during inspections. It is helpful to consult the CNSC guidance documents if there is one available for the particular part of the program.

The guides can be found here:

<http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/index.cfm>

Here are some other useful documents, including the laboratory designation posters and “Working Safely with Nuclear Gauges”:

<http://www.nuclearsafety.gc.ca/eng/resources/publications/index.cfm>

Q5: 1 mSv/year designate from NEW or non-NEW? I thought for NEW worker it was 5 mSv/year?

Answer:

This can be rather confusing to keep straight! Anyone whose dose would not be reasonable expected to reach or exceed 1 mSv/year is a non-NEW. If there is a reasonable expectation that a worker might reach or exceed 1 mSv/year, that worker must be designated as a NEW. If the NEW could be reasonably expected to reach or exceed 5 mSv/year, that worker would have to be monitored using a licensed dosimetry service provider. To summarize:

0 mSv up to 1 mSv Non-NEW (though in practice, if the expected dose is near 1 mSv/year, the worker would be a NEW)

1 mSv and above NEW

1 mSv up to 5 mSv NEW that does not have to be monitored using a licensed dosimetry service (though in practice, dosimetry should be used if the dose is expected to be anywhere near 5 mSv)

5 mSv and above NEW that must be monitored using a licensed dosimetry service

Q6: When decommissioning sources, is it a legal requirement to ensure the radiation sign is removed as well (in reference to decommissioned buildings)?

Answer:

Yes. The main legal requirement is that there is not to be any frivolous posting of signs as stated in the Radiation Protection Regulations. A radiation warning sign is only to be posted if there is a source that exceeds 100 times the exemption quantity or there is a possibility of a dose rate of 25 uSv/hour or more. If neither of those conditions are met, there should be no sign posted, whether or not the area is being decommissioned, but certainly in the case of decommissioning.

Here are some other useful resources:

CNSC licensing process, including application forms and guides: <http://nuclearsafety.gc.ca/eng/nuclear-substances/licensing-nuclear-substances-and-radiation-devices/licensing-process/index.cfm>

CNSC Forms, including forms for Class II equipment and facilities:
<http://nuclearsafety.gc.ca/eng/resources/forms/index.cfm>

Nuclear security requirements for sealed sources: http://nuclearsafety.gc.ca/pubs_catalogue/uploads/REGDOC-2-12-3-Security-of-Nuclear-Substances-Sealed-Sources.pdf

FAQ for security requirements for sealed sources: <http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-12-3/FAQ-regdoc2-12-3.cfm>

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