



Canadian Nuclear
Safety Commission

Commission canadienne
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Canada

Identifying Success Factors for RSOs to enhance CNSC Oversight

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Outline



- RSO and their role
- Current regulatory approach
- Elements of success
- Looking toward the future

THE RSO AND THEIR ROLE



CNSC staff see first hand, during licensing and compliance activities, the important role an RSO plays in nuclear safety



The Role of the RSO



- CNSC staff view of the RSO in licensing and compliance activities
 - Importance of knowledge
 - Experience
 - Commitment
- Designated by the Applicant Authority

The RSO is an essential component in the effective functioning of a radiation safety program

Who are the RSOs?



- There are 51 distinct use types for a Nuclear Substance Licence each with a distinct risk profile
- With so many usetypes there are differences in the background of the RSO
 - Research
 - NM Technologist
 - Health Physicist
 - CET or P.Eng.
 - Electrician or Instrumentation Tech
 - Scrapyard owner

For many/most
nuclear is a tool and
not primary business
line

CURRENT REGULATORY APPROACH

Current Regulatory Approach



- Each of the 51 usetype require a radiation safety program
 - Program complexity proportional to risk
- CNSC staff assess a RS program through licensing, monitored through inspection
 - RSO qualifications is a component of the assessment and the effectiveness of RSO is monitored during compliance activities
- REGDOC 1.6.1 provides guidance on the responsibilities and role of RSO.

CNSC expectations for RSOs



- REGDOC 1.6.1 v2 lay out key expectations for the person acting as RSO
 - Knowledge of radiation safety principals
 - Experience in activity being licensed
 - Knowledge of regulatory environment
 - “Commitment”

CNSC expectations are proportional to risk and complexity

Current Regulatory Oversight



- Majority of RSO meet CNSC expectation, some exceed
- CNSC staff looks to see that qualification of RSO match the licenced activity
- In most cases NSRD staff recommend **RSO training** as a supplement
- Generally reactive but is there an opportunity to be pro-active?

Why do bad things happen?



- When an RSO isn't or can't be effectively engaged there is a risk of program failure



Are there factors that lead to RSO/program success and can these be leveraged as part of the CNSC regulatory oversight approach?

ELEMENTS OF SUCCESS



CNSC/DNSR will undertake an analysis of the oversight of RSOs in order to make an evidence-based decision on regulatory approach



Identifying factors leading to success



- RSOs meet our expectation with respect to education and knowledge
- What other factors are there that may lead to success?
 - Support from senior management
 - Control over the program (active and effective)
 - Organizational factors (safety culture)
 - “Some other” factor

CNSC will use an evidence-based evaluation to identify/assess the factors to determine the best path forward

What is an evaluation?



- Framework to systematically collect, review and analyze evidence on program/policy/process performance
 - Focuses on achievement of outcomes
 - Uses multiple methods to gather data
 - Subject to standards and methodological rigour
- Will provide substantive and reliable evidence on which to base regulatory decisions or guidance going forward
- Developed with input from internal and external experts

How will an evaluation be conducted



- Initially will concentrate on medical RSOs and RSOs from the academic sector with complex programs
- Utilizing
 - surveys, interviews and focus groups (external)
 - Documentation, literature research and benchmarking (internal)

CNSC regulatory groups will not be involved in direct external data collection, data will be anonymized

- Results will be analyzed in attempt to identify factors leading to success
 - High levels of compliance
 - Low levels of events
 - Low dose rates for activity being undertaken
- Benchmark against other regulators



LOOKING TOWARD THE FUTURE

Translating to enhanced oversight



- Can the results be utilized to assist RSOs in performing their job more effectively?
 - Communicate expectations
 - Prescribed training and/or evaluation for RSOs?
 - Effective management structure?
 - Assistance to Applicant Authorities in identifying/appointing RSO
 - Ability and suitability are NOT synonymous
 - Soft skills and abilities ARE important

Communicating expectations and thoughts for the future



- REGDOC 1.6.1 v2, expectations for RSOs and AA
- New document consolidating expectations for radiation safety programs
- Engagement of external Agencies and experts to prepare a standard?

There are many stakeholders that can play a role in this, this is simply not just a regulatory issue but fundamental to all stakeholders



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Thank You !

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Questions???



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