

Annual Compliance Reporting Form

Licensed Activity: Operate and service an isotope production accelerator facility

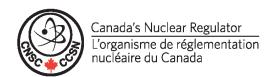
Usetype (616)

Revision Date: September 2016

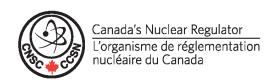




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Declaration of Licensee Representative			
I Michael Campbell	having the authority to act for the licensee pursuant to Section 15 of the General Nuclear Safety and Control		
Regulations, certify that all statements and representations made in this Annual Compliance Report and any supp	olementary pages appended to this report are true and correct to the best of my knowledge.		
Title	Date (YYYY-MM-DD)		
Radiation Safety Officer	2020-11-15		
It is an offence under the Nuclear Safety and Control Act to knowingly make a false report. For more information, or for questions on the content and/or filling of ACR forms, please contact the CNSC Direct	orate of Nuclear Substance Regulation at 1-888-229-2672.		
When complete, please submit this form via email to cnsc.acr-rac.ccsn@canada.ca or by fax to 613-995-5086.			
Print Form	Reset Form		



Licensee Organization Information							
Licensee Name					Licensee Corporation Nur	nber (if applicable)	
Thunder Bay Regional Health Sciences Centre					1122866 (Ontario)		
Licensee Business Number				Licence Number			
				01461-21-21.6			
Reporting Period							
This Annual Compliance Report covers the 12 month pe	eriod.						
From				То			
2019-11-01				2020-10-31			
Head Office Legal Address							
Street Address							
980 Oliver Road							
City	Province/State			Country		Postal/Zip Code	
Thunder Bay	ON			Canada		P7B 6V4	



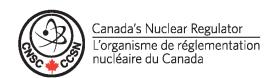
Radiation Safety Officer (RSO)						
Name		Title				
Michael Campbell		Radiation Safety Officer				
Mailing Address						
Street Address		City				
1040 Oliver Road, Suite B1		Thunder Bay				
Province/State	Country	Postal/Zip Code	Telephone Number			
ON	Canada	P7B 7A5				
Alternate Telephone Number	Facsimile	Email Address				
Alternate Radiation Safety Officer (if a	Alternate Radiation Safety Officer (if applicable)					
Check here if no alternate RSO						
Name		Title				
Sonja Desjardins		Cyclotron Associate				
Mailing Address						
Check here if same as "Radiation Safety Officer"						
Street Address		City				
1040 Oliver Road, Suite B1		Thunder Bay				
Province/State	Country	Postal/Zip Code	Telephone Number			
ON	Canada	P7B 7A5				
Alternate Telephone Number	Facsimile	Email Address				



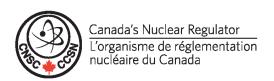


Financial Contact (if applicable)					
Name		Title			
Peter Myllymaa		Executive Vice-President, Corporate Services and Opera	ations		
Mailing Address					
Check here if same as "Radiation Safety Officer"					
Street Address		City			
980 Oliver Road		Thunder Bay			
Province/State	Country	Postal/Zip Code	Telephone Number		
ON	Canada	P7B 6V4			
Alternate Telephone Number Facsimile		Email Address			
		×××××:			
Signing Authority					
Check here if same as "Radiation Safety Officer"					
Name		Title			
Michael Campbell		Radiation Safety Officer			
Mailing Address					
Check here if same as "Radiation Safety Officer"					
Street Address		City			
1040 Oliver Road, Suite B1		Thunder Bay			
Province/State	Country	Postal/Zip Code	Telephone Number		
ON	Canada	P7B 7A5			
Alternate Telephone Number	Facsimile	Email Address			

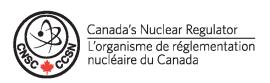




Applicant Authority							
Check here if same as "Radiation Safety Officer"							
Name		Title					
Peter Myllymaa		Executive Vice-President, Corporate Services and Opera	itions				
Mailing Address							
Check here if same as "Radiation Safety Officer"							
Street Address							
980 Oliver Road							
City	Province/State	Country	Postal/Zip Code				
Thunder Bay	ON	Canada	P7B 6V4				
Telephone Number	Alternate Telephone Number	Facsimile					
Email Address							



Inventory: Sealed Sources								
Enter your inventory of CNSC-licensed sealed sources specifi	c to this licence in the table	below. Report one source	per line.					
			Date of inventory (YYYY-MM-DD)					
Check here if you currently have no sealed sources in inv	ventory.		2020-11-03					
NOTE: The information requested on this page may be submrequired information, or see www.nuclearsafety.gc.ca/acr for		heet attached to the same o	email as this form. Please ensure your spreadsh	eet uses the same headings as in	the table below, and contains all			
	Sealed Source(s) (List only sealed sources that are not contained in a radiation device)							
Manufacturer Model Serial Number Nuclear Substance Current Activity + Activ								
Please see attached list								
† If the Current Activity is not known, but is known for a dat	e in the past, use the decay	calculator located at <a -="" 2020<="" href="http://example.com/h</td><td>//www.radprocalculator.com/Decay.aspx to de</td><td>ter mine the Current Activity</td><td></td></tr><tr><td>Comments</td><td></td><td></td><td></td><td></td><td>,</td></tr><tr><td>Please see attached file " inventory="" nov="" sealed="" source="" td=""><td>o"</td><td></td><td></td><td></td><td></td>	o"					



Inventory Unsealed Sources			
Enter your inventory of CNSC-licensed unsealed sources in possession appl	icable to this licence.		
Check here if you currently have no unsealed sources in inventory		2019-11-19	
NOTE: The information requested on this page may be submitted as a sepa required information, or see www.nuclearsafety.gc.ca/acr for templates	rate spreadsheet attached to the same	e email as this form. Please ensure your	spreadsheet uses the same headings as in the table below, and contains all
	Unseale	d Sources	
Nuclear Substance	Current Activity †		Activity Units
Activated target foils	~150		MBq
† If the Current Activity is not known, but is known for a date in the past, u	use the decay calculator located at		





Ascertainment of Doses: Whole Body

Provide a summary of the annual effective whole body radiation doses received by Nuclear Energy Workers (NEWs) and non-NEWs during the year ending December 31st. Provide the information in detail, as shown below.

NOTE: Please do NOT send personal information, such as social insurance numbers, etc. to CNSC.

	Number of Workers in each effective dose category								
	(mSv)							Dosimetry Service Provider	Maximum individual dose
	BDL†	> BDL † and ≤ 0.5	> 0.5 and ≤ 1	> 1 and ≤ 5	> 5 and ≤ 20	> 20 and ≤ 50	> 50	††	(mSv)
Number of NEWs	9	1	1	0	0	0	0	Health Canada - NDS	0.94
Number of Non-NEWs	2	0	0	0	0	0	0	Health Canada - NDS	BDL

[†] BDL = Below Detectable Limits for the dosimeter being used.

tt Enter the name of the dosimetry service provider. If a dosimetry service provider is not used, enter "ESTIMATED" and provide brief details on how dose estimates were derived in the comments area below.

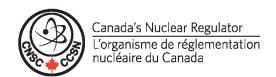
Comments

Above readings are for the 12 month period ending September 30, 2020 based on the quarterly reporting from NDS. Non-NEW's consist of cleaning staff and a graduate student Badges are also located in public spaces on main floor as area monitors. None of the area monitor badges have shown a reading above background.

The readings are lower than would normally be expected for two reasons.

- 1) The facility has not been producing FDG on a regular basis while they focus on getting the Health Canada license inplace
- 2) COVID has reduced the number of research runs





Ascertainment of	f Doses – E	xtremit	y Doses
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If your organization monitors workers for extremity exposures, provide a summary of the extremity doses received by NEWs and non-NEWs during the year ending December 31 st. Provide the information in detail, as shown below.

NOTE: Please do NOT send personal information, such as social insurance numbers, etc. to CNSC.

Check here if your organization has no extremity dose information to submit for the reporting period.

	Number of Workers in each effective dose category (mSv)							Dosimetry	Maximum
	<10	>10 and ≤ 50	> 50 and ≤ 100	> 100 and ≤ 200	> 200 and ≤ 350	> 350 and ≤ 500	> 500	Service Provider †	individual dose (mSv)
Number of NEWs	10	1	0	0	0	0	0	Health Canada - NDS	22
Number of Non-NEWs	2	0	0	0	0	0	0	Health Canada - NDS	0

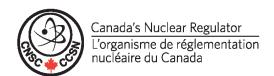
[†] Enter the name of the dosimetry service provider. If a dosimetry service provider is not used, enter "ESTIMATED" and provide brief details on how dose estimates were derived in the comments area below.

Comments

Readings are for the 12 month period ending September 30, 2020

Reading of 0 for Non-new indicates BDL





Workload - Isotope Production Accelerator

Provide a summary of the workload of isotope production accelerators during the reporting period for all operating modes. If you have exceeded your approved annual workload, please submit details in the comments area below, including an explanation as to why the approved workload was exceeded, and calculations showing that doses to persons in adjacent areas are still ALARA.

NOTE: In all cases, records of workload must be maintained for inspection by CNSC.

Target Identifier or Part No. ¹	μA-hours ²	Annual production (GBq)	Number of batches/year	No. of target failures
LT - F18	1089	2178	28	0
Neutron activation Au-197 -> Au-198	note 1	0.02	6	0
Totals	1089		28	0

NOTES:

- 1. The target Identifier listed here should match the Target Identifier in the "Part No." column of the Appendix: Licensed Targets on your licence
- 2. If reporting on dual-beam targets, provide the sum of µA-hours from both beams
- 3. If reporting on research/test/dummy targets, list each type of target individually
- 4. If different beam types were used with the same target, report each beam type on a separate line (i.e. research targets with proton beams, research targets with deuteron beam, etc.)

Comments

For the period from Nov 1, 2019 to October 31, 2020

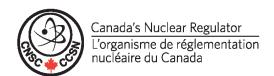
Notes:

1) For Au-198 production is done concurrently with F-18 production. The current on the F-18 target was X uA-hours for the development of the gold activation process and is included with the F-18 totals. All Au-198 is allowed to decay in house.

Activity for gold is a conservative estimate based on Gamma-spec measurements. Activity was below the detection limits for our dose calibrator. The # batches for gold is also includes in the # batches of F-18.

2) Number of batches of gold is included in the number of F-18 runs. Source of neutrons if from F-18 production.





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	11670	1.1	4	all		
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List all carriers employed to transport radioactive materials for the purposes of this licence during the reporting period:

Carrier Name	Contact Telephone (ex. 123-456-7890)	Full name of Contact (if available)	Location of Carrier (City, Province)
Carrick Express Inc.	(807) 345-7331	carrick express@tbaytel.net	Thunder Bay, Ontario

NOTE: do not list all shipments, list only carriers used to transport packages during the reporting period. If using the same carrier, there should be only one entry in the table.

