

Applicable CNSC licence number



Annual Compliance Reporting Form

Select the applicable form from the dropdown list. ACR forms are customized for the activity authorized by the licence. The licensed activity name and number (e.g. "101 - Operate an industrial accelerator"), can be found on each licence under section IV) Licensed Activities.

If you need a hard copy of this ACR form, please contact your CNSC licensing officer at 1-888-229-2672.

Licensed Activity 616 - Operate and service an isotope production accelerator facility

Generate Form

Applicable CNSC licence number

1	4	6	1	-	2	1	-	3	1	 4	

C	eclaration of Licensee Representative	
ı	Michael Campbell	having the authority to act for the licensee pursuant to Section 15 of the General Nuclear Safety and Control
Re	gulations, certify that all statements and representations made in this Annual Compliance Report and any supp	ementary pages appended to this report are true and correct to the best of my knowledge.
Ti	tle	Date (YYYY-MM-DD)
R	adiation Safety officer	2023-11-06
lt	is an offence under the Nuclear Safety and Control Act to knowingly make a false report.	

For questions related to the Accelerators and Class II Facilities Division (ACFD) ACR, contact your CNSC Project Officer.

When complete, please submit this form via email to acr-rac@cnsc-ccsn.gc.ca.

Print Form

Submit by Email

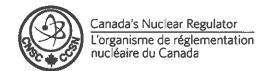


ACR forms are intended to report the licensee's activity. To request an amendment, including changes in licensee's representatives (RSO, alternate, applicant authority, signing authority), please submit your request separately to the CNSC.



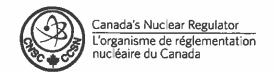
The ACR can not be used by licensees to request changes to the licence.

Any changes requiring a licence amendment or to comply with licence conditions must be submitted separately to the Project Officer when you become aware of the change.



	i l	í I		1										
												[
													.	
1	4	161	1		-	רו	1 1		-	2	1		A	
	_	_	-			_		l I			' '		7	

Licensee Organization Information	icensee Organization Information											
Licensee Name												
Thunder Bay Regional Health Sciences Centre												
Licensee Business Number			Licensee Corporation Number									
Reporting Period		L 55										
here should not be any lapse from previous ACR reporting period. Do not report for future dates. The reporting period shall cover a full year.												
From To												
2022-11-01 2023-10-31												
Head Office Address												
Street Address												
980 Oliver Rd												
City	Province/State		Country	Postal/Zip Code								
Thunder Bay	Ontario		Canada	P7B6V4								
Mailing Address												
The malling address is the address to which all CNSC con	respondence will be mailed.											
Check here if same as Head Office Address												
Street Address												
1040 Oliver Rd, Suite B1												
City	Province/State		Country	Postal/Zip Code								
Thunder Bay	Ontario		Canada	P7B7A5								



_	_		_												
ı	- 1			1						ł		l			
ı	- 1						Ì		i I	1	l	l			
ı	- 1	!										l			
l '	1 1	4	6	1		-	1 2	1 1		-	3	1 1	1	ΙΔ.	
	' !				Į į		_	' '				' '		7	1

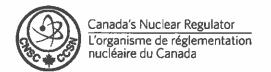
Radiation Safety Officer (RSO)			
Name		Title	
Michael Campbell		Radiaiton Safety Officer	
Telephone Number	Alternate Telephone Number		E-mail Address
	807-343-8110 x8106		mike.campbell@lakeheadu.ca
Alternate (if applicable)			
Please provide information of an alternate contact to the RSO in this section Refer to Class II Nuclear Facilities and Prescribed Equipment Regulations sect https://laws.justice.gc.ca/eng/regulations/sor-2000-205/page-1.html Check here if no alternate	The alternate contact can replace the ions 15.1 and 15.11.	the certified RSO during the RSO's abso	ence for not more than 60 working days in any consecutive 365-day period.
Name	· · · · · · · · · · · · · · · · · · ·	Title	
Sonja Desjardins		Cyclotron Associate	
Contact information			
Telephone Number	Alternate Telephone Number		E-mail Address
807-684-7010			desjards@tbh.net
Signing Authority			
The RSO is typically appointed as signing authority. The signing authority is a	uthorized to act for the applicant or lic	ensee for all matters encompassed by t	the CNSC licence.
✓ Check here if same as 'Radiation Safety Officer'			
Name		Title	
Michael Campbell		Radiaiton Safety Officer	
Contact information			
Check here if same as 'Radiation Safety Officer'			
Telephone Number	Alternate Telephone Number		E-mail Address
	807-343-8110 x8106		mike.campbell@lakeheadu.ca



Applicable	CNSC	licence	number
------------	------	---------	--------

ı					 						_	
ı								l		l		ŀ
ı								l		l		
ı		ŀ					l '	l		l		
ı	1	4	6	1 1	-	2	1	-	l 3	l 1	4	i .
ı		4	6	1] - '	2	1	-	3	1	Ι.	. 4

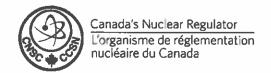
Financial Contact (if applicable)											
Information required only for fee paying licensees.											
Name			Title								
Peter Myllymaa			Executive Vice-President, Corporate Services and Operations								
Contact information											
Telephone Number		Alternate Telephone Number		E-mail Address							
806-684-6023				myllymap@tbh.ne	et						
Mailing Address				2 31370							
✓ Check here if same as 'Head Office' Address											
Street Address											
980 Oliver Road	980 Oliver Road										
City	Province/State		Country		Postal/Zip Code						
Thunder Bay	Ontario		Canada		P7B6V4						
Applicant Authority											
The applicant authority is an individual at the senior ma It is a regulatory requirement to notify the CNSC within	inagement level that 15 days of a change	at has sufficient authority to direct fina e in the applicant authority. <u>Section 1</u>	ncial and human resources to address 5 of the General Nuclear Safety and Co	any issue of non-control Regulations	ompliance as identified by the CNSC. under the Nuclear Safety and Control Act.						
Name			Title								
Peter Myllymaa			Executive Vice-President, Corporate S	Services and Opera	tions						
Contact information											
Telephone Number		Alternate Telephone Number		E-mail Address							
806-684-6023				myllymap@tbh.ne	et						
Mailing Address											
Street Address											
980 Oliver Road, Suite B1											
City Province/State			Country	-	Postal/Zip Code						
Thunder Bay	Ontario		Canada		P7B6V4						



Applicable	CNSC	licence	number
------------	------	---------	--------

ı															
ı	.							l				l			
ı					i i							l			
ı	1	4	6	1		_	2	1	1 1	۱.	2	۱.,		I 4	
ı		4	О		L						ے	1	١. ١	4	

lnv	entory: Sealed Sources (Li	st only sealed sources that are	not contained in a radia	tion device)			
Ente	r your inventory of CNSC-licensed seale	ed sources specific to this licence in the tabl	e below. Report one source per line.				
	Check here if you currently have no sea	led sources in inventory.	Date of i 2023-11	nventory (YYYY-MM-DD)			
requ List	i <mark>ired information, or see</mark> <u>www.nuclears</u>	ge may be submitted as a separate spreads afety.gc.ca/acr for templates. n of seed sources (e.g.: I-125, etc.) along with			preadsheet uses the same hea	dings as in the table be	low, and contains all
+							
		List	Sealed Source(only sealed sources that are not con				
	Manufacturer	Model	Serial Number (N/A for seed sources)	Nuclear Substance	Current Activity	Quantity (seed sources only)	Activity Units
-	please see attached list	please see attached list	please see attached list	please see attached list	please see attached list		
For	all sealed nuclear substances that have	been transferred or disposed of during the	reporting period, please include a co	ppy of the transfer document v	vith the ACR submission.	<u> </u>	
					ín.		
	litional information						
Plea	ise see attached list.						



Applicable CNSC licence number

1 4 6 1 - 2 1 - 3 1 4	1	4	6	1		-	2	1		_	3	1		4		
-----------------------	---	---	---	---	--	---	---	---	--	---	---	---	--	---	--	--

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 (workers not designated as NEWs) during the year ending December 31st. Provide the information in detail, as shown below. Only report doses for staff working in Canada.

NOTE: Please do NOT send personal sensitive information, such as social insurance numbers, to the CNSC. If the total number of workers reported for NEWs or Non-NEWs is less than ten (10), do NOT report the maximum individual dose.

		Number of Workers in each effective dose category									
	BDL †	> BDL † and ≤ 0.5 mSV	> 0.5 mSv and ≤ 1 mSv	> 1 mSv and ≤ 2 mSv	> 2 mSv and ≤ 5 mSv	> 5 mSv and ≤ 20 mSv	> 20 mSv	Dosimetry Service Provider ††	Maximum Individual Dos (mSv) † † †		
Number of NEWs	5	3	3					Health Canada	0.72		
Number of Non-NEWs	5							Health Canada	BDL		

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

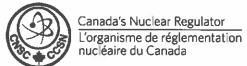
† Enter the name of the dosimetry service provider. If a dosimetry service provider is not used, enter "ESTIMATED" and provide brief details on how dose estimates were derived in the additional information area below.

††† Do not enter a non-personal dose that was the subject of a CNSC approved dose change request.

In accordance with the Radiation Protection Regulations, doses must be reported for a CALENDAR YEAR (January 1 to December 31). Please report your doses for the calendar year preceding your ACR due date (e.g. regardless of the ACR reporting date in licence condition 2912 on your licence, always report the doses for the period Jan 1 - Dec 31 of the previous calendar year).

Additional Information

This report covers the period from Jan 1 2022 to Dec 31 2022. Non-NEWs include cleaning staff and graduate students



								1			1		
					l I								
i	3				[1						
							!						
1 1	4	6	1 1	- 1	וכו	1 1		-	2	1		lα	
١.)	١.	١.	"	

						[1 4 6	5	2 1 3	1 . 4
Ascertainment of Doses – Extre	emity								
Provide a summary of the annual equivalent enter the information in detail, as shown below. On NOTE: Please do NOT send personal sensitive individual dose.	ly report dose for staff w	orking in Canada.							
Check here if your organization has no ex	tremity dose information	n to submit for the	reporting period.				·	· · · · · · · · · · · · · · · · · · ·	
			Number of Wor	kers in each effection	ve dose category				
	< 10 mSv	≥ 10 mSv and ≤ 50 mSv	> 50 mSv and ≤ 100 mSV	> 100 mSv and ≤ 200 mSv	> 200 mSv and ≤ 350 mSv	>350 mSv and ≤ 500 mSv	> 500 mSv	Dosimetry Service Provider †	Maximum individual dose (mSv) † †
Number of NEWs	4	3			1			Health Canada	257
Number of Non-NEWs									
† Enter the name of the dosimetry service pr † † Do not enter a non-personal dose that w				ATED" and provide t	orief details on how	dose estimates wer	e derived in the ad	Iditional information a	rea below.
In accordance with the Radiation Protection R of the ACR reporting date in licence condition	Regulations, doses must l n 2912 on your licence, al	be reported for a Ci lways report the do	ALENDAR YEAR (Janusses for the period Ja	uary 1 to December n 1 - Dec 31 of the p	31). Please report yo previous calendar ye	our doses for the ca ar).	lendar year preced	ling your ACR due dat	e (e.g. regardless
Additional Information									
								<u> </u>	

Applicable CNSC licence number

	1	4	6	1	_	2	1		_	2	1	1	
L	1	4	O					L		3	<u> </u>	4	

Workload - Isotope Production Accelerator

Provide a summary of the workload of the Class II prescribed equipment during the reporting period for all operating modes. If you have exceeded your approved annual workload, please submit details in the "Additional Information" 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 that in all cases, records of workload must be maintained for inspection by the CNSC.

NOTE: The information requested on this page may be submitted as a separate spreadsheet attached to the same email as this form. Please ensure your spreadsheet uses the same headings as in the table below, and contains all required information, or see www.nuclearsafety.gc.ca/acr for templates.

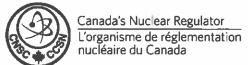
+

	Target identifier or Part Number 1	Annual uA-hours ²	Annual Production (GBq)	Number of batches/year	Number of targets rebuilt
-	LT - F18	7,876	15,752	97	1
-	LT - N13*	73.5	425	S	1
	Totals	7,949.5	16,177	102	2

- 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.)

Additional Information

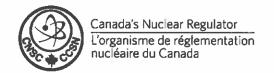
*Same physical target used for both F18 and N13. N13 only used to test beam and cyclotron operation. N-13 activity is estimate



Applicable	CNSC	licence	number
------------	------	---------	--------

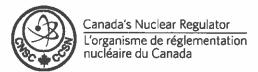
1	4	6	1	-	2	1	-	3	_1	4	

		_ 1	4 6 1 - 2 1 - 3 1 . 4
Ado	ditional Information for Nuclear Substances and Clas	s II Facilities	
Pleas nucle	e provide additional information related to the Class II prescribed equipmen ear-safety-related trends and to inform future compliance strategies.	it, as detailed below. Note that provision of this information is not a regulatory	y requirement; CNSC requests this information in order to examine
+			
	Prescribed equipment Item Number 1	Greatest extent servicing performed during the reporting period. ²	Radiation survey performed during reporting period? If yes, see Note 3.
-	1	Corrective	No
equi 2. Th	ipment. Report one item per row. Add additional rows as necessary. e various extents of servicing are defined as follows: Not applicable: Not licensed to service Class II prescribed equipment None Preventive maintenance: Limited to basic servicing activities and period Corrective maintenance: Limited to preventive maintenance, plus troul Extensive servicing: Corrective maintenance, plus replacement of majo contained within the prescribed equipment, or dismantling of the pres-	bleshooting and limited repairs or adjustments or components, refurbishment of Class II prescribed equipment, installation or	replacement of the prescribed equipment or nuclear substances
	itional Information pump replacement		



1	4	6	1	-	2	1	l	-	3	1	١.	4	

Oversight Activities – Safety Performance Indicators
Provide information regarding any regulatory oversight activity performed during the reporting period. Note that provision of this information is not a regulatory requirement; CNSC requests this information in order to examine nuclear-safety-related trends and to inform future compliance strategies.
Performed review of radiation safety policies and procedures
Performed self-audit/inspection of radiation safety program 1
Performed peer-audit/inspection of radiation safety program ²
Other (please describe)
Other regulatory oversight activity or additional information
 Self audit/inspection is defined as an audit conducted by internal team members to determine the extent of compliance with the act, the regulations and the licence. A peer audit/inspection is defined as an audit/inspection conducted by participants who have no direct responsibility in the work/process being audited in order to maintain objectivity.



Applicable	CNSC	licence	number
------------	------	---------	--------

1		_		_		_				_			
1													
													i .
	_		_	_ ا		I _ I		1			Ι.		
	- 1	4	6	. 1	-	2	1,		-	3	1	4	

Pu	blic Information and	Disclosure Program
req Not	uirement; CNSC requests this in e: Only fill this table if the licen	communication/outreach performed during the reporting period to inform members of the public of your licensed activities. Note that provision of this information is not a regulatory information in order to examine nuclear-safety-related trends and to inform future compliance strategies. The condition entitled Public Information and Disclosure Program is on your licence (LC-2901). The condition entitled Public Information and Disclosure Program is on your licence (LC-2901).
+		
	Date	Activity
-	2023-02-28	Tour for Lakehead University
-	2023-07-19	Cyclotron Facility Tour
-	2023-09-18	Cyclotron Facility Tour
-	2023-11-06	Posting of ACR and update to PIP website
Ade	ditional Information	

Applicable CNSC licence number

1	4	6	1	_	-	2	1	-	3	1	4	

Transport Carriers

List all carriers employed to transport radioactive materials for the purposes of this licence during the reporting period. Note that provision of this information is not a regulatory requirement; CNSC requests this information in order to examine nuclear-safety-related trends and to inform future compliance strategies.

ㅗ	
т	

	Carrier Name	Contact Telephone	Full name of contact (if available)	Location of Carrier (City, Province)
-	Carrick Express Inc			Thunder Bay, ON

Note: Do not list all shipments, list only carriers hired to transport radioactive materials for the purposes of this licence during the reporting period.

DO NOT include licensee employees in this list. If no carriers were hired, leave the table blank. If using the same carrier, there should be only one entry in the table.