



# Annual Compliance Reporting Form

## **Licensed Activity:**

Operate and service an isotope production accelerator facility (616)





**Licensee Organization Information**

|  |                            |  |  |
|--|----------------------------|--|--|
| Licensee Name<br>Thunder Bay Regional Health Sciences Centre     |                            | <p style="text-align: center;"><b>Reporting Period</b></p> <p style="text-align: center;">This Annual Compliance Report covers the 12 month period from:</p> <p style="text-align: center;">From <input type="text" value="Nov 1, 2016"/> To <input type="text" value="October 31, 2017"/></p> |  |
| Licensee Corporation Number (if applicable)<br>1122866 (Ontario) |                            |  |  |
| Licensee Business Number (if applicable)                         |                            |  |  |
| <b>Head Office Legal Address</b>                                 |                            |  |  |
| Street Address<br>980 Oliver Road                                |                            | <p style="text-align: center;"><b>Licence Number</b></p> <p style="text-align: center;"><input type="text" value="01461-21-21.5"/></p>   |  |
| City<br>Thunder Bay  | Province/State<br>Ontario  |  |  |
| Country<br>Canada  | Postal/Zip Code<br>P7B 6V4 |  |  |

**Licence Contact Person (Person with authority to act for the licensee in dealing with the CNSC)**

|   |  |                                    |                            |
|---|--|------------------------------------|----------------------------|
| Name:<br>Michael Campbell   |  | Title:<br>Radiation Safety Officer |                            |
| Mailing Address<br><input type="checkbox"/> Check here if same as "Head Office Legal Address" above |  |                                    |                            |
| Street Address<br>1040 Oliver Road, Suite B1  |  |                                    |                            |
| City<br>Thunder Bay   | Province/State<br>Ontario                  | Country<br>Canada                  | Postal/Zip Code<br>P7B 7A5 |
| Telephone Number<br>.....   | Alternate Telephone Number<br>807-684-7010 | Facsimile<br>807-768-4347          |                            |
| Email Address<br>campbelm@tbh.net   |  |                                    |                            |



**Radiation Safety Officer (RSO)**

Check here if the RSO is the same as "Licence Contact Person" on previous page

|       |        |
|-------|--------|
| Name: | Title: |
|-------|--------|

Mailing Address  
 Check here if same as "Licence Contact Person" on previous page

Street Address

|      |                |         |                 |
|------|----------------|---------|-----------------|
| City | Province/State | Country | Postal/Zip Code |
|------|----------------|---------|-----------------|

|                  |                            |           |
|------------------|----------------------------|-----------|
| Telephone Number | Alternate Telephone Number | Facsimile |
|------------------|----------------------------|-----------|

Email Address

**Alternate Radiation Safety Officer (if applicable)**

Check here if no alternate RSO

|                           |                               |
|---------------------------|-------------------------------|
| Name:<br>Sonja Desjardins | Title:<br>Cyclotron Associate |
|---------------------------|-------------------------------|

Mailing Address  
 Check here if same as "Radiation Safety Officer"

Street Address

|      |                |         |                 |
|------|----------------|---------|-----------------|
| City | Province/State | Country | Postal/Zip Code |
|------|----------------|---------|-----------------|

|                                    |                            |           |
|------------------------------------|----------------------------|-----------|
| Telephone Number<br>(807) 684-7010 | Alternate Telephone Number | Facsimile |
|------------------------------------|----------------------------|-----------|

Email Address  
desjards@tbh.net



**Financial Contact (if applicable)**

|  |                            |   |                            |
|--|----------------------------|---|----------------------------|
| Name:<br>Peter Myllymaa  |                            | Title:<br>Executive Vice-President, Corporate Services and Operations |                            |
| Mailing Address<br><input type="checkbox"/> Check here if same as "Radiation Safety Officer" |                            |   |                            |
| Street Address<br>980 Oliver Road  |                            |   |                            |
| City<br>Thunder Bay  | Province/State<br>Ontario  | Country<br>Canada   | Postal/Zip Code<br>P7B 6V4 |
| Telephone Number   | Alternate Telephone Number | Facsimile<br>807-684-5892   |                            |
| Email Address<br>myllymap@tbh.net  |                            |   |                            |

**Signing Authority**

|  |                            |           |                 |
|--|----------------------------|-----------|-----------------|
| <input type="checkbox"/> Check here if same as "Radiation Safety Officer"                    |                            |           |                 |
| Name:  |                            | Title:    |                 |
| Mailing Address<br><input type="checkbox"/> Check here if same as "Radiation Safety Officer" |                            |           |                 |
| Street Address   |                            |           |                 |
| City   | Province/State             | Country   | Postal/Zip Code |
| Telephone Number   | Alternate Telephone Number | Facsimile |                 |
| Email Address  |                            |           |                 |





**Applicant Authority**

Check here if same as "Radiation Safety Officer"

|                         |   |
|-------------------------|---|
| Name:<br>Peter Myllymaa | Title:<br>Executive Vice-President, Corporate Services and Operations |
|-------------------------|---|

Mailing Address  
 Check here if same as "Radiation Safety Officer"

Street Address  
980 Oliver Road

|                     |                           |                   |                            |
|---------------------|---------------------------|-------------------|----------------------------|
| City<br>Thunder Bay | Province/State<br>Ontario | Country<br>Canada | Postal/Zip Code<br>P7B 6V4 |
|---------------------|---------------------------|-------------------|----------------------------|

|                  |                                 |                           |
|------------------|---------------------------------|---------------------------|
| Telephone Number | Alternate Telephone Number<br>: | Facsimile<br>807-684-5892 |
|------------------|---------------------------------|---------------------------|

Email Address  
myllymap@tbh.net





### Inventory: Sealed/Unsealed Sources

Enter your inventory of CNSC-licensed sealed/unsealed sources in the table below. Report one source per line.

Check here if you currently have no sealed/unsealed sources in inventory.

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](http://www.nuclearsafety.gc.ca/acr) for templates.

| Unsealed or Sealed Source(s) |                     |                             |                   |                    |                      |                 |
|------------------------------|---------------------|-----------------------------|-------------------|--------------------|----------------------|-----------------|
| Manufacturer (sealed only)   | Model (sealed only) | Serial Number (sealed only) | Nuclear Substance | Current Activity † | Activity Units       | Sealed/Unsealed |
|                              |                     |                             |                   |                    | <input type="text"/> |                 |
|                              |                     |                             |                   |                    | <input type="text"/> |                 |
|                              |                     |                             |                   |                    | <input type="text"/> |                 |

† If the Current Activity is not known, but it is known for a date in the past, use the decay calculator located at <http://www.radprocalculator.com/Decay.aspx> to determine the Current Activity

Comments:  
See Attached Inventory Lists.



### 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 31<sup>st</sup>. 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<br>(mSv) |                         |                     |                   |                    |                     |      | Dosimetry<br>Service Provider<br>†† | Maximum<br>individual dose<br>(mSv) |
|-----------------------|--|-------------------------|---------------------|-------------------|--------------------|---------------------|------|-------------------------------------|-------------------------------------|
|                       | BDL †  | > BDL †<br>and<br>≤ 0.5 | > 0.5<br>and<br>≤ 1 | > 1<br>and<br>≤ 5 | > 5<br>and<br>≤ 20 | > 20<br>and<br>≤ 50 | > 50 |                                     |                                     |
| Number of<br>NEWs     | 6  | 3                       | 0                   | 0                 | 0                  | 0                   | 0    | Health Canada - NDS                 | 0.3                                 |
| Number of<br>Non-NEWs | 3  | 0                       | 0                   | 0                 | 0                  | 0                   | 0    | Health Canada - NDS                 | 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 comments area.

Comments:

Above readings are for the 12 month period ending September 30, 2017 based on the quarterly reporting from NDS. Non-NEW's consist of cleaning staff, students and visitors. 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.





### Ascertainment of Doses – Extremity Doses

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<sup>st</sup>. 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 Service Provider † | Maximum individual dose (mSv) |
|--------------------|---|--------------|----------------|-----------------|-----------------|-----------------|-------|------------------------------|-------------------------------|
|                    | <10   | >10 and ≤ 50 | > 50 and ≤ 100 | > 100 and ≤ 200 | > 200 and ≤ 350 | > 350 and ≤ 500 | > 500 |                              |                               |
| Number of NEWs     | 5   | 4            | 0              | 0               | 0               | 0               | 0     | Health Canada - NDS          | 29.8                          |
| Number of Non-NEWs | 3   | 0            | 0              | 0               | 0               | 0               | 0     | Health Canada - NDS          | BDL                           |

Comments:

† 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.

The dose measurements reported are the sum of Left and Right hand doses. Readings are for the 12 month period ending September 30, 2017. Non-NEW's consist of students and visitors.





### Workload – Isotope Production Accelerators

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 in 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](http://www.nuclearsafety.gc.ca/acr) for templates.

| Prescribed Equipment | Room       | Product | Product Physical State (Gas/Liquid/Solid) | Total Annual Operation Time (hrs) | Total Annual Yield (GBq) |
|----------------------|------------|---------|---|-----------------------------------|--------------------------|
| ACSI TR24 - Cyclotrn | 01 - Vault | F-18    | Liquid                                    | 28                                | 2316                     |
|                      |            | C-11    | Gas                                       | 0                                 | 0                        |
|                      |            | n/a     | Solid                                     | 0                                 | 0                        |
|                      |            |         |   |                                   |                          |
|                      |            |         |   |                                   |                          |

Comments:

For the period from Nov 1, 2016 to October 31, 2017





**Transport Carriers**

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

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





### Declaration of Licensee Representative

I,  (enter name)

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 supplementary pages appended to this report are true and correct to the best of my knowledge.

Title:

Date:

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 Directorate of Nuclear Substance Regulation at 1-888-229-2672.

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