2024	
2024-01	TRIUMF will be welcoming members of the Canadian Nuclear Safety Commission (CNSC) for an on-site inspection, scheduled for April 12-24, as part of a follow-up on an inspection from February 2021.
2024-02	As part of our Environmental Risk Assessment and Monitoring program, TRIUMF conducts regular vegetation sampling outside the site perimeter twice per year. These samples undergo rigorous testing to ensure compliance with environmental regulations. In our most recent sampling period (Fall/Winter 2023), six out of eight samples indicated the presence of several species associated with the production of medical isotopes. The observed quantities are low, ranging between 0.5-5.0 Bq/kg. The environmental model governing TRIUMF emissions conservatively predicts that the releases of these species in 2023 will result in a maximum potential dose to the public on the order of 350 nSv. This dose is roughly equivalent to what a person would receive by eating 3-4 bananas or taking a six-minute flight in an airplane at cruising altitude. As a reminder, the Canadian Nuclear Safety Commission (CNSC), via their Independent Environmental Monitoring program (IEMP), has consistently found levels of radioactivity in the TRIUMF-adjacent environment to be low, and well within the range of natural background radiation levels. You can review their annual results from TRIUMF sampling work here. Currently, TRIUMF is investigating the nature of the release, and operations will not be undertaken until a corrective action is in place.
2024-03	On July 4th, 2024, TRIUMF detected a brief and small release of activity from an isotope production facility. It was determined that the total release would have exposed a member of the public to 1/100,000,000 of our regulatory limit or 1/500,000 of a flight from Vancouver to Toronto, or the same as .003 bananas (banana equivalent dose). An investigation is underway to determine the proper corrective action.
2024-04	While commissioning a new experiment, TRIUMF measured a small, unexpected release of a radioisotope at the experiment stack. The estimated impact to a member of the general public is approximately 3.4 pSv, which is equivalent to 1/300,000,000 of the regulatory limit (1 mSv) or less than 1/100,000 of the dose received during a flight from Vancouver to Toronto. It is also comparable to the dose from eating about 1/30,000 of a

	single banana. TRIUMF will investigate how to mitigate releases of this nature in future operations.
2023	
2023-01	In August, 2023, the CNSC released the results of its periodic **Independent Environmental Monitoring program (IEMP)**. Per their findings: "In September 2022, we collected air, soil, and vegetation samples in publicly accessible areas outside the facility perimeter. The levels of radioactivity measured in air, soil and vegetation were below our own screening levels. Our screening levels are based on conservative assumptions about the exposure that would result in a dose of 0.1 mSv per year (one-tenth of the regulatory public dose limit of 1 mSv per year). **Measurements conducted by the IEMP to date have consistently found levels of radioactivity in the environment to be low, and well within the range of natural background radiation levels. As a result, no effects on human health are expected**."
2023-02	On September 2, 2023, TRIUMF detected a brief and very small release of activity from an isotope production facility. It was determined that the maximum impact to a member of the public corresponded to approximately 1/100,000 of the regulatory limit, which is the same as 1/3000 of a flight from Vancouver to Toronto, or 1/100 of a single banana (a banana equivalent dose). An investigation is underway to determine the proper corrective action.
2023-03	On December 14, 2023, the Canadian Nuclear Safety Commission (CNSC) revised TRIUMF's Licence Condition Handbook (LHC), a comprehensive document which describes the nature and scope of TRIUMF activities that are regulated by the CNSC. The revised LCH further strengthens the alignment between TRIUMF and the CNSC regarding TRIUMF's operating parameters and will support TRUMF's ability to implement new and improved safety measures in a timely manner.
2022	
2022-01	TRIUMF will be participating in a scheduled CNSC license renewal hearing on March 23, 2022. To learn more about the license renewal process, click here. The link to the live March 23 hearing can be found here.

2022-02	Following the license renewal process, the Canadian Nuclear Safety Commission (CNSC) announced the Commission's decision to renew, for a period of 10 years, the Class IB particle accelerator licence held by TRIUMF Accelerators Inc. (TAI). The Commission also announced its decision to transfer the renewed licence from TAI to TRIUMF Inc., a not-for-profit corporation under the Canada Not-for-profit Corporations Act. The renewed and transferred licence authorizes TRIUMF Inc. to continue to operate 7 particle accelerators and to possess, transfer, use, and store nuclear substances arising from its operation, which support a diverse program of isotope science and the production of critical medical isotopes. More information can be found in the announcement here.
2022-03	On the week of September 23rd, the CNSC will be on site to sample collect samples of air, vegetation and soil around the TRIUMF site as part of the Commission's Independent Environmental Monitoring Program (IEMP). This work is routine and not in response to any particular event or concern with respect to TRIUMF's operations. Results from the last round of IEMP sampling at TRIUMF can be found here: http://www.nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/triumf.cfm
2022-04	On November 8, a small fire occurred in a non-radiological HVAC filtration unit located on the roof of the Service Annex of the main 520 MeV cyclotron building. The TRIUMF Driver Control Room Operators responded to the incident in accordance with laboratory plans and procedures; the Vancouver Fire Department (VFD) responded shortly thereafter and extinguished the fire with no incident of injury, exposure to hazardous/radiological materials, or significant property damage to the facility. The HVAC unit was confirmed to be supplying heated air to the offices located in the Service Annex. The VFD inspector also concluded there to be no foul play associated with the incident. Preliminary investigations determined a likely cause to be the overheating of a system component used to provide heated air. TRIUMF continues to investigate to confirm the root cause of the fire. Once the investigation is complete, TRIUMF Environmental Health and Safety teams will determine an appropriate course of action.
2021	
2021-01	On January 19, TRIUMF detected a small release of activity from an isotope processing laboratory. The impact to a member of the general public corresponded to approximately 1/500 of the regulatory limit or 1/150 of the dose received during the course of a flight from Vancouver to Toronto.. An investigation is underway to determine the proper

	corrective action, and the operation that resulted in the release will not be undertaken until corrective action can be taken.
2021-02	In the late evening of August 1, through the morning of August 2, there was a release of activity from a radioisotope production target. The impact to a member of the general public corresponded to approximately 1/5000 of the regulatory limit. An investigation is underway to determine the cause of the failure that generated the release. The operation that resulted in the release will not be undertaken until corrective action is in place to prevent recurrence.
2021-03	On October 19, TRIUMF will conduct an onsite safety drill from 11:00 am - 12:00 pm to exercise the laboratory's Emergency Response Plan. This drill will be observed by representatives from Canadian Nuclear Safety Commission (CNSC). During this period, passersby may hear drill-related announcements on the public address system or witness the gathering of TRIUMF staff at our designated assembly areas. We anticipate completion of the drill sometime before noon and will be returning to normal operations shortly thereafter.
2021-04	On the week of October 18th, the Canadian Nuclear Safety Commission (CNSC) performed a regulatory inspection at TRIUMF which included a detailed review of our safety programs relating to Emergency Response, Fire Protection, and Waste Management. The CNSC inspection collected evidence of TRIUMF's regulatory compliance through extensive document reviews, interviews with TRIUMF staff, field walkdown inspections of our work areas, and by observing our performance of a mock emergency drill that simulated a small spill of hazardous material. These periodic inspections are routinely performed by the CNSC throughout each year to verify regulatory compliance with the laws and regulations TRIUMF follows to protect Canadian's health and our environment when performing scientific research and operating medical isotope production facilities. This was a planned, routine inspection required as a stipulation of our operating license and was not in response to any particular event or concern with respect to TRIUMF's operations.
2021-05	On November 5, TRIUMF detected a small release of activity from the TR-13 cyclotron hot cell, located in the Meson Hall. The impact to a member of the general public corresponded to approximately 1/50000 of the regulatory limit or 1/15000 of the dose received during the course of a flight from Vancouver to Toronto. An investigation is underway to determine the proper corrective action, and the operation that resulted in the release will not be undertaken until corrective action can be taken.

2020	
2020-01	A small release of radioactivity occurred during medical isotope production on April 9, 2020. The impact to a member of the general public corresponded to less than 1/25,000 of the regulatory limit, or 1/7,000 of the dose received during the course of a flight from Vancouver to Toronto. TRIUMF has halted production and is investigating the incident to determine the root cause. Corrective actions will be taken before production can resume.
2020-02	The CNSC has released the results of the latest round of routine environmental sampling of air, soil, and vegetation done in the vicinity of TRIUMF as part of their Independent Environmental Monitoring Program (IEMP; please also see item 2019-07). The monitoring results show no evidence of radioactivity originating from TRIUMF operations in any of the samples. Further informationcan be found on the CNSC web site here: http://www.nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/triumf.cfm
2020-03	A small release of radioactivity occurred during medical isotope production on June 23, 2020. The impact to a member of the general public corresponded to approximately 1/1000 of the regulatory limit, or 1/300 of the dose received during the course of a flight from Vancouver to Toronto. TRIUMF has halted production and is investigating the incident to determine the root cause. Corrective actions will be taken before production can resume.
2020-04	Regular emissions monitoring in August found evidence of a low-level leak occurring intermittently across a period of several weeks. The impact to a member of the general public corresponded to approximately 1/25000 of the regulatory limit, or 1/7000 of the dose received during the course of a flight from Vancouver to Toronto. TRIUMF halted production to complete an investigation and the corrective action was completed.
2020-05	A recent analysis discovered that a series of small releases of radioactivity occurred during medical isotope production occurred intermittently across a period of weeks from late August to early October. The impact to a member of the general public corresponded to approximately 1/6000 of the regulatory limit, or 1/1800 of the dose received during the course of a flight from Vancouver to Toronto. An investigation is underway to determine the proper corrective action.

2020-06	On Friday, October 2, TRIUMF detected a small release of radioactivity from a medical isotope production target facility. The impact to a member of the general public corresponded to approximately 1/5000 of the regulatory limit, or 1/1500 of the dose received during the course of a flight from Vancouver to Toronto. Corrective actions will be taken before operations resume.
2020-07	On November 17, TRIUMF detected a small release of radioactivity from an isotope production target facility. The impact to a member of the general public corresponded to approximately 1/2000000 of the regulatory limit, or 1/600000 of the dose received during the course of a flight from Vancouver to Toronto. Corrective actions will be taken before the process that resulted in the release is repeated.
2019	
2019-01	Technical Experts from the Canadian Nuclear Safety Commission (CNSC) conducted a Type II Inspection at the facility from April 23rd – 25th, 2019. The CNSC will summarize the results of the inspection in a formal report and provide it to TRIUMF.
2019-02	On May 28, 2019 TRIUMF released gaseous krypton at a level 2000 times below the regulatory limit during routine medical isotope production. The event was reported to the regulatory authority. TRIUMF is investigating and will take appropriate action to address the matter.
2019-03	On June 14, 2019 technical experts from PLC Fire Safety Solutions inspected TRIUMF's Facility Fire Hazard Assessment and Fire Protection Systems. Their report will be shared with TRIUMF and CNSC and used to strengthen fire safety across our site.
2019-04	On June 18, 2019 TRIUMF detected a slow release of xenon gas from a target used for medical isotope production. This release was 1000 times below the regulatory limit. The target was removed from service and the event was reported to the regulatory authority. TRIUMF and BWXT are investigating the incident and will make necessary repairs and process improvements before resuming operation.
2019-05	On Aug. 27 and Aug. 28, during routine medical isotope production on a rubidium target, gaseous krypton was released from TRIUMF at a level less than 1/1000 of the regulatory limit. The event was reported to the regulatory authority. As a result of this release, TRIUMF has voluntarily stopped irradiation of rubidium targets for medical isotope

	production until the root cause of the issue can be identified and appropriately addressed.
2019-06	As part of a scheduled safety exercise, there will be an evacuation drill involving all on-site TRIUMF staff and visitors on the morning of September 10, 2019.
2019-07	On the week of September 23rd, the CNSC will be on site to sample collect samples of air, vegetation and soil around the TRIUMF site as part of the Commission's Independent Environmental Monitoring Program (IEMP). This work is routine and not in response to any particular event or concern with respect to TRIUMF's operations. Results from the last round of IEMP sampling at TRIUMF can be found here: http://www.nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/triumf.cfm
2019-08	Two small releases of radioactivity occurred in October during medical isotope production. Their combined impact to a member of the general public corresponded to less than 1/15,000 of the regulatory limit, or 1/5,000 of the dose received during the course of a flight from Vancouver to Toronto. TRIUMF investigated the incidents and implemented process improvements to address their root causes and prevent future releases of this type.
2019-09	On Dec 10th – 13th, 2019, technical experts from the CNSC conducted a routine inspection of TRIUMF pursuant to the facility's operating license. The inspection focused on the operational performance of TRIUMF programs and facilities.
2019-10	A shielded container containing material used for medical isotope production was damaged by the freight carrier while in transit from TRIUMF. No radiation was released. A new container was procured and the package was conveyed to the intended destination. There was no hazard to personnel or the public.