



TRIUMF Memo

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To: Division Heads; AAPS management

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From: Joe Mildenberger

File: radmat

RE: Bringing Radioactive Material to TRIUMF

Recent incidents involving radioactive material being brought onto site without having followed the Receive Permit process indicate that there are people working here who are unaware of the procedures required to be followed. These procedures are outlined in TRIUMF Safety Note 6.4.1 "[Use and Procurement of Calibration Sources](#)" (Document-652), whose scope is in fact significantly broader than its title implies. This safety note should be considered as "required reading" anyone who may desire to bring any radioactive material to TRIUMF for any reason.

The crux of the requirements to which we all must adhere is outlined clearly in the first section of TSN 6.4.1:

The Canadian Nuclear Safety Commission (CNSC) regulates the use of radioactive material in Canada, and a licence from the CNSC is required in order to receive, handle, or ship quantities of radioactivity in excess of the CNSC definition of 'exempt quantities'. All radioactive material on the TRIUMF site (except that used and produced by MDS Nordion) is regulated by the terms and conditions in the TRIUMF accelerator operating licence, therefore *all* radioactive sources at TRIUMF fall under the authority of the TRIUMF Radiation Protection Group who represent the Director of TRIUMF as the accelerator operating licence holder.

The mechanism by which the Radiation Protection Group (RPG) exercises this mandate is called the "TRIUMF Radioactive Material Order/Receive Permit", or "[Receive Permit](#)" (Document-20476) for short. Anyone who desires to bring radioactive material onto site, for any reason, *must* fill out a Receive Permit form, which must be accompanied by a Safety Analysis Report (SAR) that addresses the following:

- The quantity, species, physical, and chemical form
- Any special handling/labelling requirements during use
- Provision for storage when not in use
- Ultimate disposal once no longer required

To be valid, the form and SAR must be reviewed by the RPG Head, and authorized by the responsible Division Head.

Further, full approval must be granted prior to initiating the shipment of the material to TRIUMF. Any packages containing radioactive material that arrive at TRIUMF without having been approved through this process will be returned to the sender, unopened.

The reason for what may be seen as a somewhat harsh policy is also clearly outlined in TSN 6.4.1:

It is contrary to TRIUMF policy and also illegal to bring radioactive material onto the site without fulfilling these requirements.

What this means in practice is that people need to plan well in advance if they are going to purchase or otherwise obtain radioactive material for use at TRIUMF. This includes, but is not limited to:

- Calibration sources obtained via purchase, loan, or returned from being loaned
- Samples for use in experiments
- Materials for the construction of production targets
- Activated equipment components

These rules also apply to consignments whose shipment is initiated by non-TRIUMF employees at other institutions. In that case it is the *responsibility of the TRIUMF contact* to ensure that the correct procedures are followed.

Further, the acquisition of certain so-called “safeguarded” materials—specifically, uranium, thorium, and plutonium— from *any* foreign country requires an import permit issued by the federal Ministry of Foreign Affairs, and so a lead time of *at least several months* prior to the intended use of the material should be allowed.

For any consignment they desire to be brought onto the TRIUMF site, all employees should consider it their personal responsibility to:

- 1. Determine whether that consignment contains radioactive materials, and if so**
- 2. Ensure that all items containing radioactive materials are dealt with in accordance with these rules outlined above**

The CNSC regulators do not consider ignorance of the applicable rules and regulations as a valid excuse for non-compliance, and neither should anyone working at TRIUMF. If in doubt, ask!