

*If you are using a printed copy of this procedure, and not the on-screen version, then you **MUST** make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.*

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

8.24.a BURF for Vacuum Group

C-A-OPM Procedures in which this Attachment is used.		
8.24		

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: \_\_\_\_\_ *Signature on File* \_\_\_\_\_  
 Collider-Accelerator Department Chairman Date

P. Cirnigliaro

# BNL Beryllium Use Review Form

<b>Dept</b> C-A	<b>Building</b> 911A	<b>Room (Area, Location)</b> 144, Vacuum Lab
<b>Users (Name/Life#) or (Job Title):</b>  Vacuum group technicians		
<b>Status of beryllium use:</b> <input checked="" type="checkbox"/> In use on frequent basis <input type="checkbox"/> Planned use in the near future <input type="checkbox"/> Possible Future Use <input type="checkbox"/> No planned use: <input type="checkbox"/> keep <input type="checkbox"/> dispose <input type="checkbox"/> Legacy (inherited): <input type="checkbox"/> keep <input type="checkbox"/> dispose		
<b>Describe Use or Process</b> (such as Analytical Standard, Window, Beam Tube, Attenuator, Sample Holder, Stock Material, etc ): Beam Line Window <input checked="" type="checkbox"/> Meets definition of "Article" <input type="checkbox"/> Meets definition of "laboratory use"		
<b>Describe Handling Procedure:</b> (such as "article removed from storage bag, and inserted into holder, without the need for physical alteration of article") Article removed from storage bag and placed in test fixture		
<b>Potential for Airborne Exposure Assessment:</b> (include measured or predicted air concentration and method of determining concentration)  No airborne exposure expected based on previous experience at BNL		
<b>Amount used:</b> (such as grams per month) Varies		
<b>Frequency of use:</b> (such as # days per year or month, # tests per year, in continuous use, etc.)  Replace every year		
<b>Precautions during Use:</b> (check all that apply) <input type="checkbox"/> Always opened and used in lab hood <input checked="" type="checkbox"/> Handled on lab bench or room <input type="checkbox"/> Used in closed system <input type="checkbox"/> Other:  <input type="checkbox"/> Parts encapsulated <input type="checkbox"/> Parts coated		<b>Storage:</b> (check all that apply) <input type="checkbox"/> In vented cabinet <input type="checkbox"/> On lab shelf, lab bench, or cabinet <input type="checkbox"/> Inside lab hood Other:  <input checked="" type="checkbox"/> Stored in labeled bags or bottles <input checked="" type="checkbox"/> Locked area/cabinet, access control
<b>Written Documentation:</b> <input type="checkbox"/> Experimental Review (1.3.5) <input type="checkbox"/> Material recorded in CMS Inventory <input type="checkbox"/> Work Permit (1.3.6) <input checked="" type="checkbox"/> Static inventory <input type="checkbox"/> Written SOP (describe): <input type="checkbox"/> Each part bar coded		
<b>Personal Protective Equipment used:</b>  <input checked="" type="checkbox"/> Gloves (describe material, thickness): vinyl or nitrile disposable <input type="checkbox"/> Impervious suit <input type="checkbox"/> Lab coat <input type="checkbox"/> BNL laundered clothing <input type="checkbox"/> Respirator, type:		

**Spill, Release, Breakage Clean-up Plan** (Describe possible release scenario and action, including clean-up worker training, exposure monitoring, personal protective equipment, and disposal):

- Broken Be windows must be handled with care to avoid injury from sharp pieces and to avoid dispersal of any Be dust.
- Workers must don disposable nitrile or vinyl gloves before collecting large pieces by hand. Large pieces should be placed in a rigid container, or heavy plastic bag, to avoid injury from sharp edges. Collection with tongs, tweezers, or forceps is preferable.
- Surfaces contaminated with broken articles should be wiped with alcohol soaked rags after collection of large pieces to remove smaller pieces and any dust.
- After wiping with alcohol-soaked rags, surfaces should be vacuumed with a dedicated beryllium HEPA filtered vacuum.
- Wipe samples should be done on all surfaces to ensure complete cleanup. This can be arranged through the ES&H Coordinator.
- All waste must be labeled and disposed of as Hazardous Waste.

**Pollution Prevention Plan:** (Describe pollution prevention and waste minimization measures):

A dedicated beryllium vacuum cleaner is available to avoid the introduction of mixed waste.

**End of Project Plan:** (Describe the actions when the use of beryllium is no longer needed, including accounting for material consumption and funding of disposal):

Any unused beryllium will be disposed of as hazardous waste, or returned to the manufacturer if possible.

**Completed by:**  
Peter Cirmigliaro

**Date:**

**Reviewed by:**  
Asher Etkin

**Date:**

**Approved by:**  
Ray Karol

**Date:**