

Brookhaven National Laboratory/Light Sources Directorate			
Subject:	Vacuum Procedures For Beamline U2B		
Number:	LS-OPS-0042	Revision: C	Effective: 12/08/2011
Prepared By: J.P. Hu		Reviewed By: J. Klug	Approved By: J.P. Hu
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*Approval signatures on file with master copy.

The following procedures must be followed when bleeding up different beam line sections and when returning these sections to operation .

**I. SECTION BETWEEN VALVE V1 AND VALVE V3
(PROCEDURE TO BE PERFORMED BY NSLS VACUUM GROUP ONLY)**

A. Bleed-Up

1. Notify the Coordinator (Beeper 5824).
2. Refer to Front-End Vacuum Procedures (SLS-07.19-13-1).

B. Return to Operation

1. Notify the Coordinator (Beeper 5824).
2. Refer to Front-End Vacuum Procedures (SLS-07.19-13-1).

II. SECTION BETWEEN VALVE V3 AND DIAMOND WINDOW

A. Bleed-Up

1. Notify the Coordinator (Beeper 5824).
2. Close and seal Valve V3 and Valve V1.
3. Hook up turbo pump to this section and isolate turbo.
4. Coordinator places Yellow Tags on Valve V3 and Valve V1.
5. Slowly bleed up with boil-off N2 while Coordinator monitors pressure on Gauge G1.

B. Return to Operation

1. Bake and pump to $< 2.0 \times 10^{-9}$ Torr.
2. Notify the Coordinator (Beeper 5824).
3. Prepare for RGA scan.*
4. Open Valve V3 and Valve V1 provided pressure at Gauge G1 $< 2.0 \times 10^{-9}$ Torr.
5. Perform RGA scan.*
6. If RGA scan or pressure reading (if no RGA scan required) is satisfactory, Coordinator removes Yellow Tags from Valve V3 and Valve V1.
7. Remove any unprotected turbo pump from this section or valve off the turbo pump and place a Yellow Tag on the valve.**

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*** NSLS POLICY FOR RGA SCANS (24 HOUR NOTICE REQUIRED)**

An RGA scan is required before returning to operation if there is a major change of hardware in the vacuum system, i.e. changing of samples, mirrors, windows, monochromator crystals or gratings, manipulators, detectors, etc., **with the following two exceptions:**

1. After UHV sample chambers have been bled up for replacing components, an RGA scan will not be required if the chamber pressure is returned to $< 2 \times 10^{-9}$ Torr and the Front End pressure remains $< 2 \times 10^{-9}$ Torr when vacuum sections upstream of the chamber are opened into the Front End.
2. If any vacuum section upstream of the bled-up section remains at a pressure of $< 9 \times 10^{-10}$ Torr as read using a hot-filament ion gauge, when the entire beamline is opened into the Front End, and the Front End pressure does not increase, no RGA is required.

**** NSLS TURBO PUMP POLICY**

An unprotected turbo pump is one not separated from the Front End by a beamline valve which automatically closes in the event of a power loss or a pressure increase at the turbo pump. **No unprotected turbo pump can share a contiguous vacuum with the Front End.**

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Document Review Frequency

3 Years

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LIGHT SOURCES DIRECTORATE REVISION LOG

Document Number:	LS-OPS-0046	
Subject:	VACUUM PROCEDURES FOR BEAMLINE U2B	
Rev	Description	Date
A	Original document	
B	Significant changes to beamline configuration	04/17/2002
C	Changed prepared by: & approved by to J.P. Hu	12/08/2011

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DOCUMENT APPROVAL FORM

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APPROVALS		
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Comments:		

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