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*Approval signatures on file with master copy.

The following procedures must be followed when bleeding up different beamline sections and when returning these sections to operation (refer to Beam Line Layout Drawing):

I. FRONT-END (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 2A AND Be WINDOW 1A

A. Bleed-Up

1. Notify the Coordinator (Beeper 5824).
2. Close and seal Valve 2A.
3. Hook up turbo pump to this section and isolate turbo.
4. Coordinator places Yellow Tag on Valve 2A Controller.
5. Slowly bleed up with boil-off N_2 while Coordinator monitors the Front-End pressure.

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 2A provided pressure $< 2.0 \times 10^{-9}$ Torr downstream of the valve.
5. Perform RGA scan.*
6. If RGA scan or pressure reading (if no RGA scan required) is satisfactory, Coordinator removes Yellow Tag from Valve 2A.
7. Remove any unprotected turbo pump from this section or valve off the turbo pump and place a Yellow Tag on the valve.**

III. SECTION BETWEEN Be WINDOW 1A AND Be WINDOW 4A

The section between Be Window 1A and Be Window 2A is in vacuum.
The section between Be Window 2A and Be Window 3A (Monochromator Tank) contains Helium.
The section between Be Window 3A and Be Window 4A (Mirror Tank) is in vacuum.

A. Bleed-Up

1. Notify the Coordinator (Beeper 5824).
2. Close and seal Valve 2A.
3. Coordinator places Yellow Tag on Valve 2A Controller.
4. Slowly bleed up with boil-off N_2 while Coordinator monitors the Front-End pressure.

B. Return to Operation

1. Pump to $< 1.0 \times 10^{-6}$ Torr.
2. Notify the Coordinator (Beeper 5824).
3. Open Valve 2A provided pressure $< 1.0 \times 10^{-6}$ Torr downstream of Be Window 1A.
4. If pressure reading is satisfactory, Coordinator removes Yellow Tag from Valve 2A.

The section of the beamline between Be Window 4A and the experimental setup contains Helium.

*** 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 $< 2\times10^{-9}$ Torr and the Front End pressure remains $< 2\times10^{-9}$ 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 $< 9\times10^{-10}$ 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.**

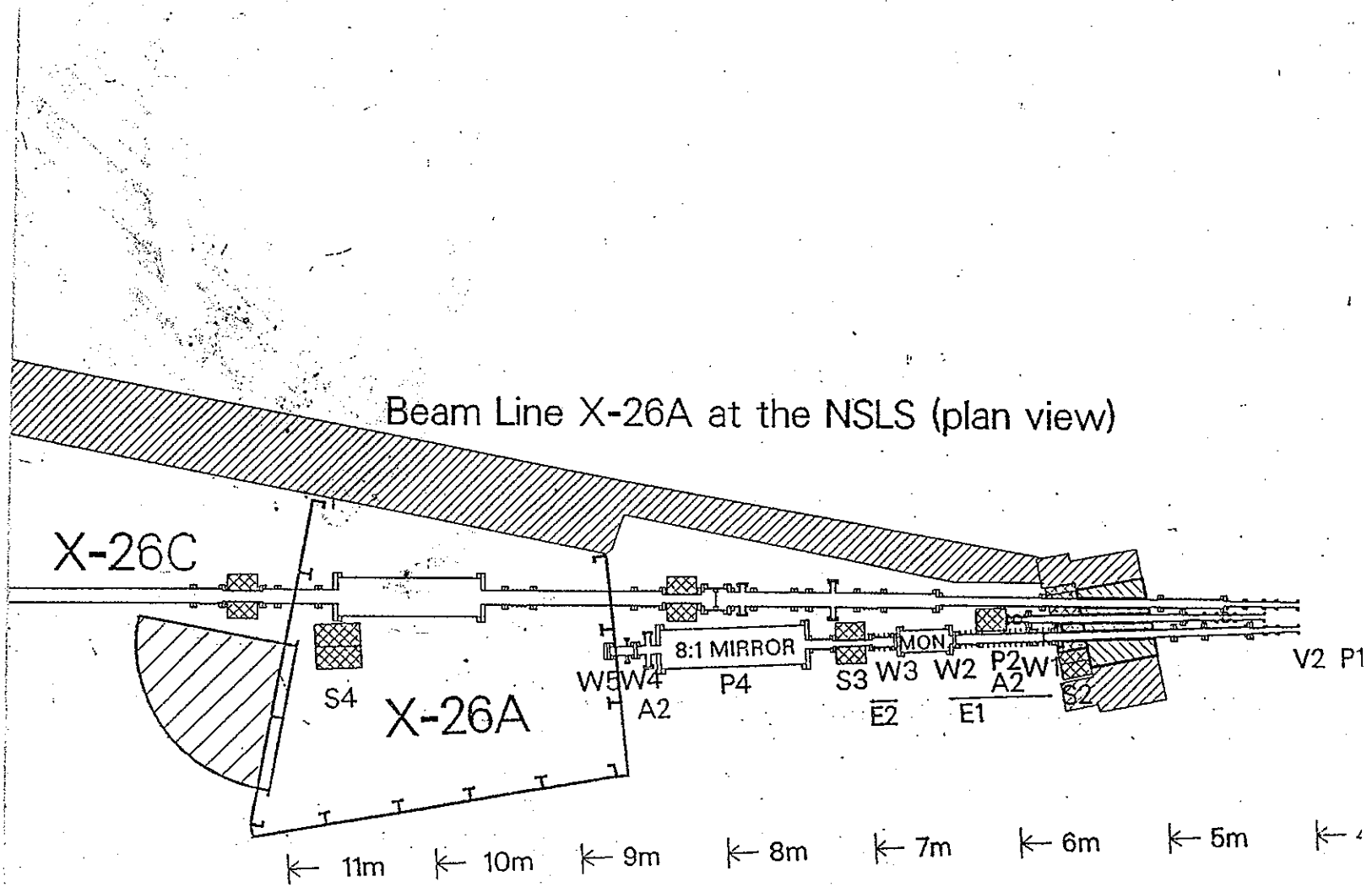
Document Review Frequency	
3	Years

Review signatures on file with master copy of controlled document

LIGHT SOURCES DIRECTORATE REVISION LOG

Document Number:	
Subject:	VACUUM PROCEDURES FOR BEAMLINE X-26A

Rev	Description	Date
B	Initial release in to the Controlled Document System.	03/15/2011


Beam Line X-26A at the NSLS (plan view)
X-26C
X-26A
S4
W5
W4
A2
8:1 MIRROR
P4
S3
W3
W2
P2
A2
W1
S2
MON
E2
E1
V2
P1
11m
10m
9m
8m
7m
6m
5m